

=> fil reg

FILE 'REGISTRY' ENTERED AT 10:13:42 ON 27 MAR 2009  
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STRUCTURE FILE UPDATES: 25 MAR 2009 HIGHEST RN 1127021-37-7  
 DICTIONARY FILE UPDATES: 25 MAR 2009 HIGHEST RN 1127021-37-7

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH January 9, 2009.

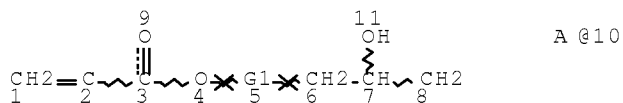
Please note that search-term pricing does apply when  
 conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and  
 predicted properties as well as tags indicating availability of  
 experimental property data in the original document. For information  
 on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stdoc/properties.html>

=> d que

L5 STR



REP G1=(0-20) 10

NODE ATTRIBUTES:

NSPEC IS RC AT 10

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

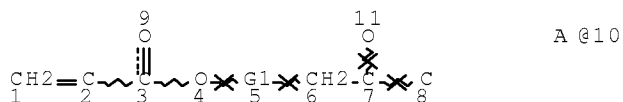
GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 11

STEREO ATTRIBUTES: NONE

L9 STR



REP G1=(0-20) 10

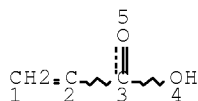
NODE ATTRIBUTES:

10/579,066

NSPEC IS RC AT 7  
NSPEC IS RC AT 8  
NSPEC IS RC AT 10  
NSPEC IS RC AT 11  
DEFAULT MLEVEL IS ATOM  
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 11

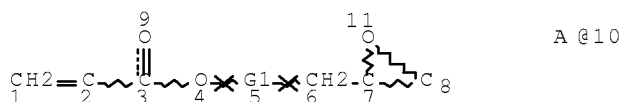
STEREO ATTRIBUTES: NONE  
L11 SCR 2043  
L13 55359 SEA FILE=REGISTRY SSS FUL L9 AND L11  
L16 STR



NODE ATTRIBUTES:  
DEFAULT MLEVEL IS ATOM  
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 5

STEREO ATTRIBUTES: NONE  
L18 5040 SEA FILE=REGISTRY SUB=L13 SSS FUL (L5 AND L16)  
L20 STR



REP G1=(0-20) 10  
NODE ATTRIBUTES:  
NSPEC IS RC AT 10  
DEFAULT MLEVEL IS ATOM  
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 11

STEREO ATTRIBUTES: NONE  
L22 6933 SEA FILE=REGISTRY SUB=L13 SSS FUL (L20 AND L16)  
L24 3345 SEA FILE=HCAPLUS ABB=ON PLU=ON L18  
L25 4885 SEA FILE=HCAPLUS ABB=ON PLU=ON L22  
L26 7907 SEA FILE=HCAPLUS ABB=ON PLU=ON (L24 OR L25)  
L28 4179 SEA FILE=HCAPLUS ABB=ON PLU=ON L26 (L) PREP/RL  
L29 21466 SEA FILE=HCAPLUS ABB=ON PLU=ON "OPTICAL FILTERS"+PFT,NT/C

T

L30	225	SEA FILE=HCAPLUS	ABB=ON	PLU=ON	L28 AND L29
L31	59	SEA FILE=HCAPLUS	ABB=ON	PLU=ON	L30 AND RACT/RL
L32	1	SEA FILE=HCAPLUS	ABB=ON	PLU=ON	L30 AND CURABLE POLYMER COMPOUND?
L33	9	SEA FILE=HCAPLUS	ABB=ON	PLU=ON	L30 AND METHACRYLATE ESTER?
L34	2	SEA FILE=HCAPLUS	ABB=ON	PLU=ON	L30 AND CURABLE POLYMER?
L35	65	SEA FILE=HCAPLUS	ABB=ON	PLU=ON	(L31 OR L32 OR L33 OR L34)
L36	33	SEA FILE=HCAPLUS	ABB=ON	PLU=ON	L35 AND (1840-2003)/PRY,AY ,PY
L38	242	SEA FILE=HCAPLUS	ABB=ON	PLU=ON	L28 AND (COLOUR OR COLOR) (2A)FILTER?
L39	15	SEA FILE=HCAPLUS	ABB=ON	PLU=ON	L38 AND MERCAPTO?
L40		QUE	ABB=ON	PLU=ON	METAL HALID? OR TERTIARY AMIN? OR PY RIDIN? OR PYRIDINIUM? OR QUATERNARY AMMONIUM? OR PHOSPHIN ? OR PHOSPHONIUM? OR IMIDAZOL? OR BENZYLTRIMETHYL? OR AMM ONIUM CHLORID?
L41	1677	SEA FILE=HCAPLUS	ABB=ON	PLU=ON	QYE BENZYLTRIETHYL AMMONIUM CHLORID? OR TETRABUTYL AMMONIUM BROMID? OR TRIPHENYL PHOSPHIN? OR ETHYLTRIPHENYL PHOSPHONIUM BROMID? OR TETRAPHENYL PHOSPHONIUM BROMID? OR BENZYLTRIPHENYL PHOSPHONIUM? OR 2-METHYL IMIDAZOL?
L42	8	SEA FILE=HCAPLUS	ABB=ON	PLU=ON	L36 AND (L40 OR L41)
L43	3	SEA FILE=HCAPLUS	ABB=ON	PLU=ON	L39 AND (L40 OR L41)
L44	15	SEA FILE=HCAPLUS	ABB=ON	PLU=ON	L39 OR L43
L45	7	SEA FILE=HCAPLUS	ABB=ON	PLU=ON	L44 AND (1840-2003)/PRY,AY ,PY
L46	35	SEA FILE=HCAPLUS	ABB=ON	PLU=ON	L36 OR L42 OR L45
L47	33	SEA FILE=HCAPLUS	ABB=ON	PLU=ON	L46 AND (COLOUR OR COLOR) (2A)FILTER?
L48	35	SEA FILE=HCAPLUS	ABB=ON	PLU=ON	L46 OR L47
L49	5	SEA FILE=HCAPLUS	ABB=ON	PLU=ON	L48 AND CATALYST?
L50	35	SEA FILE=HCAPLUS	ABB=ON	PLU=ON	L48 OR L49

=> fil hcap

FILE 'HCAPLUS' ENTERED AT 10:13:48 ON 27 MAR 2009

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

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FILE COVERS 1907 - 27 Mar 2009 VOL 150 ISS 14

FILE LAST UPDATED: 26 Mar 2009 (20090326/ED)

HCAPLUS now includes complete International Patent Classification (IPC) reclassification data for the third quarter of 2008.

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<http://www.cas.org/legal/infopolicy.html>

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d 150 1-35 ibib ed abs hitstr hitind

L50 ANSWER 1 OF 35 HCAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2005:451432 HCAPLUS Full-text  
 DOCUMENT NUMBER: 143:8522  
 TITLE: Curable polymer  
 compound containing methacrylate  
 ester groups  
 INVENTOR(S): Kamijo, Masanao; Onishi, Mina; Murofushi, Katsumi  
 PATENT ASSIGNEE(S): Showa Denko K. K., Japan  
 SOURCE: PCT Int. Appl., 42 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005047346	A1	20050526	WO 2004-JP16505	20041101
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RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1682589	A1	20060726	EP 2004-799528	20041101
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CN 1878798	A	20061213	CN 2004-80033362	20041101
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JP 2005163033	A	20050623	JP 2004-328725	20041112
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KR 2006090717	A	20060814	KR 2006-709299	20060512
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PRIORITY APPLN. INFO.:			JP 2003-382759	A 20031112
<--				
			US 2003-523309P	P 20031120
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			WO 2004-JP16505	W 20041101

ED Entered STN: 27 May 2005

AB There are provided a novel curable polymer compound of the present invention comprises having a structure represented:  $\text{CH}_2=\text{C}(\text{R}_1)\text{COO}(\text{R}_2)_n\text{CH}_2\text{CH}(\text{OH})\text{CH}_2\text{OOC}-$  wherein  $\text{R}_1$  represents a hydrogen atom or a Me group,  $\text{R}_2$  independently has one or more organic residues selected from the group consisting of an alkylene group, a branched alkylene group, an alkenylene group, a branched alkenylene group, a cycloalkylene group, a cycloalkenylene group and an arylene group, and  $n$  represents an integer of 0 to 1, a method of preparing the polymer compound, a radical polymerizable and curable composition using the polymer compound, and a cured product obtained by photo-curing the radical polymerizable and curable composition. A curable resin was prepared by reaction of glycidyl methacrylate and 4-hydroxybutylacrylate glycidyl ether with methacrylic acid-p-methylstyrene copolymer.

IT ~~852316-39-3P~~ ~~852316-40-6P~~ ~~852316-41-7P~~

(curable polymer compound containing  
methacrylate ester groups)

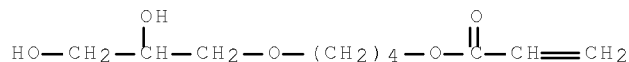
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CN 2-Propenoic acid, 2-methyl-, polymer with 1-ethenyl-4-methylbenzene,  
2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl  
2-hydroxy-3-[4-[(1-oxo-2-propenyl)oxy]butoxy]propyl ester (9CI) (CA  
INDEX NAME)

CM 1

CRN 251298-12-1

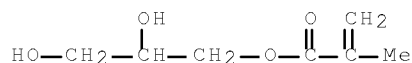
CMF C10 H18 O5



CM 2

CRN 5919-74-4

CMF C7 H12 O4



CM 3

CRN 42248-78-2

CMF (C9 H10 . C4 H6 O2)x

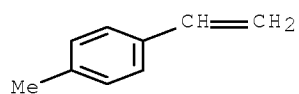
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CM 4

CRN 622-97-9

CMF C9 H10

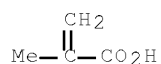
10/579,066



CM 5

CRN 79-41-4

CMF C4 H6 O2



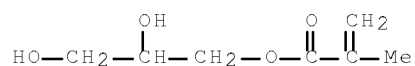
RN 852316-40-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with 1-ethenyl-4-methylbenzene,  
2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl ester (9CI) (CA  
INDEX NAME)

CM 1

CRN 5919-74-4

CMF C7 H12 O4



CM 2

CRN 42248-78-2

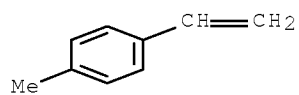
CMF (C9 H10 . C4 H6 O2) x

CCI PMS

CM 3

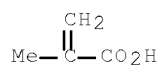
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CMF C9 H10



CM 4

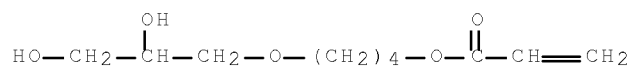
CRN 79-41-4  
CMF C4 H6 O2



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2-methyl-2-propenoate, 2-hydroxy-3-[(2-methyl-1-oxo-2-  
propenyl)oxy]propyl 2-hydroxy-3-[4-[(1-oxo-2-  
propenyl)oxy]butoxy]propyl ester (9CI) (CA INDEX NAME)

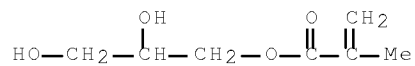
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CRN 251298-12-1  
CMF C10 H18 O5



CM 2

CRN 5919-74-4  
CMF C7 H12 O4

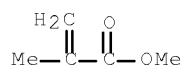


CM 3

CRN 25086-15-1  
CMF (C5 H8 O2 . C4 H6 O2)x  
CCI PMS

CM 4

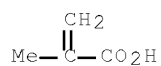
CRN 80-62-6  
CMF C5 H8 O2



CM 5

CRN 79-41-4

CMF C4 H6 O2



IT 852316-42-8P 852316-43-9P 852316-44-0P  
 (curable polymer compound containing  
 methacrylate ester groups)

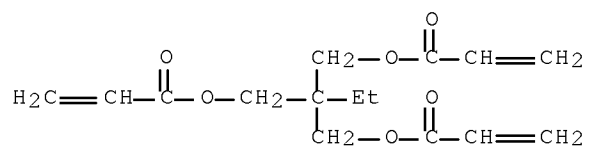
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CN 2-Propenoic acid, 2-methyl-, polymer with 1-ethenyl-4-methylbenzene,  
 2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl  
 2-hydroxy-3-[4-[(1-oxo-2-propenyl)oxy]butoxy]propyl ester, polymer  
 with 2-ethyl-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl  
 di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 15625-89-5

CMF C15 H20 O6



CM 2

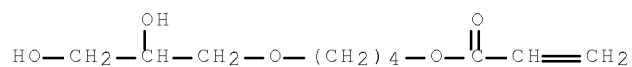
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CMF C10 H18 O5 . x (C9 H10 . C4 H6 O2)x . x C7 H12 O4

CM 3

CRN 251298-12-1

CMF C10 H18 O5



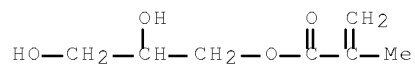


10/579,066

CM 4

CRN 5919-74-4

CMF C7 H12 O4



CM 5

CRN 42248-78-2

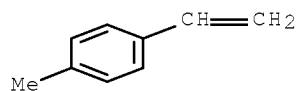
CMF (C9 H10 . C4 H6 O2)x

CCI PMS

CM 6

CRN 622-97-9

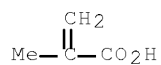
CMF C9 H10



CM 7

CRN 79-41-4

CMF C4 H6 O2



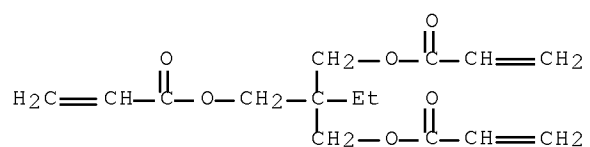
RN 852316-43-9 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with 1-ethenyl-4-methylbenzene, 2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl ester, polymer with 2-ethyl-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 15625-89-5

CMF C15 H20 O6



CM 2

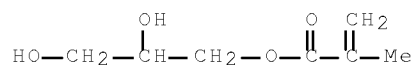
CRN 852316-40-6

CMF (C9 H10 . C4 H6 O2) x . x C7 H12 O4

CM 3

CRN 5919-74-4

CMF C7 H12 O4



CM 4

CRN 42248-78-2

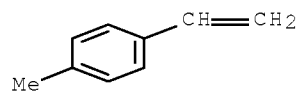
CMF (C9 H10 . C4 H6 O2) x

CCI PMS

CM 5

CRN 622-97-9

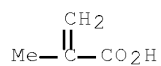
CMF C9 H10



CM 6

CRN 79-41-4

CMF C4 H6 O2



10/579,066

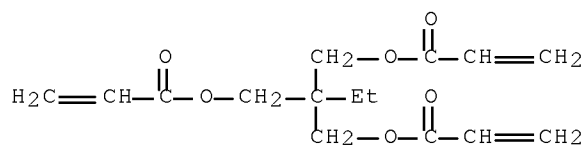
RN 852316-44-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with methyl  
2-methyl-2-propenoate, 2-hydroxy-3-[(2-methyl-1-oxo-2-  
propenyl)oxy]propyl 2-hydroxy-3-[4-[(1-oxo-2-  
propenyl)oxy]butoxy]propyl ester, polymer with  
2-ethyl-2-[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl  
di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 15625-89-5

CMF C15 H20 O6



CM 2

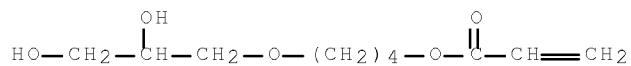
CRN 852316-41-7

$$\text{CMF} \quad \text{C}_{10} \text{H}_{18} \text{O}_5 \cdot x \text{C}_7 \text{H}_{12} \text{O}_4 \cdot x (\text{C}_5 \text{H}_8 \text{O}_2 \cdot \text{C}_4 \text{H}_6 \text{O}_2) x$$

CM 3

CRN 251298-12-1

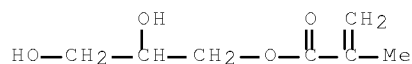
CMF C10 H18 O5



CM 4

CRN 5919-74-4

CMF C7 H12 O4



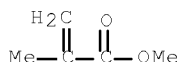
CM 5

CRN 25086-15-1

CMF (C5 H8 O2 . C4 H6 O2)x  
 CCI PMS

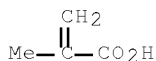
CM 6

CRN 80-62-6  
 CMF C5 H8 O2



CM 7

CRN 79-41-4  
 CMF C4 H6 O2



IC ICM C08F008-14  
 ICS C08F020-18; G03F007-00  
 CC 37-3 (Plastics Manufacture and Processing)  
 IT Optical filters  
   (curable polymer compound containing  
   methacrylate ester groups)  
 IT 25086-15-1P, Methacrylic acid-methyl methacrylate copolymer  
 42248-78-2P, Methacrylic acid-p-methylstyrene copolymer  
 852316-39-3P 852316-40-6P 852316-41-7P  
   (curable polymer compound containing  
   methacrylate ester groups)  
 IT 852316-42-8P 852316-43-9P 852316-44-0P  
   (curable polymer compound containing  
   methacrylate ester groups)  
 REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR  
 THIS RECORD. ALL CITATIONS AVAILABLE IN THE  
 RE FORMAT

L50 ANSWER 2 OF 35 HCAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2005:371328 HCAPLUS Full-text  
 DOCUMENT NUMBER: 142:412280  
 TITLE: Black composition, black coating composition for  
   color filter for liquid crystal  
   display  
 INVENTOR(S): Yoshioka, Masahiro; Nagase, Ryo; Tsujii, Masaya;  
   Eguchi, Masuichi  
 PATENT ASSIGNEE(S): Toray Industries, Inc., Japan  
 SOURCE: PCT Int. Appl., 39 pp.  
   CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

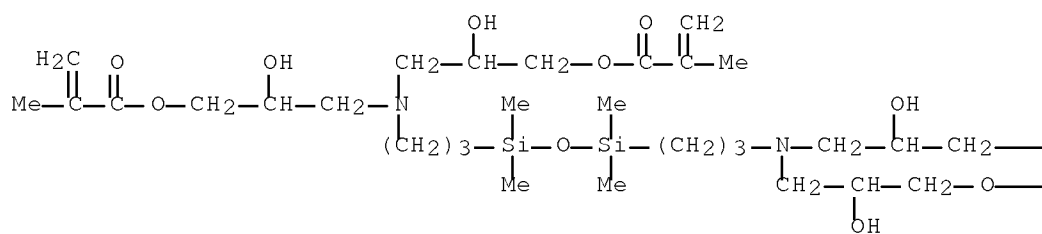
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005037926	A1	20050428	WO 2004-JP15134	20041014
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W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1674531	A1	20060628	EP 2004-792366	20041014
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R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
CN 1867636	A	20061122	CN 2004-80030614	20041014
<--				
US 20070059612	A1	20070315	US 2006-575776	20060413
<--				
PRIORITY APPLN. INFO.:			JP 2003-354873	A 20031015
<--				
			WO 2004-JP15134	W 20041014
ED	Entered STN: 29 Apr 2005			
AB	<p>The black composition is capable of providing a resin black matrix of high adherence and high OD value having been attained by metal thin-film black matrixes only. The black composition comprises titanium oxynitride and a resin [e.g., benzophenonetetracarboxylic dianhydride-bis(3-aminopropyl)tetramethyldisiloxane-4,4'-diaminodiphenyl ether-3,3'-diaminodiphenylsulfone-maleic anhydride-pyromellitic dianhydride copolymer], wherein the X-ray intensity ratios R1 and R2 satisfying the relationships of the following formulas: <math>R1 &gt; 0.70</math> and <math>0.85 &lt; R2 &lt; 1.80</math> (<math>R1 = I3/[I3 + 1.8(I1 + 1.8I2)]</math>; <math>R2 = I2/I1</math>; <math>I1</math> = maximum diffraction ray intensity when the titanium oxynitride diffraction angle <math>2\theta</math> is <math>25-26^\circ</math> in <math>CuK\alpha</math> rays as x-ray source; <math>I2</math> = maximum diffraction ray intensity when the titanium oxynitride diffraction angle <math>2\theta</math> is <math>27-28^\circ</math> in <math>CuK\alpha</math> rays as x-ray source; and <math>I3</math> = maximum diffraction ray intensity when the titanium oxynitride diffraction angle <math>2\theta</math> is <math>36-38^\circ</math> in <math>CuK\alpha</math> rays as x-ray source).</p>			
IT	850309-66-9P (black composition containing titanium oxynitride and polyimide or acrylic polymer for color filter in liquid crystal display)			
RN	850309-66-9 HCAPLUS			
CN	2-Propenoic acid, 2-methyl-, polymer with 2,2-bis[[ (2-methyl-1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl bis(2-methyl-2-propenoate), methyl 2-methyl-2-propenoate, 7-oxabicyclo[4.1.0]hept-3-ylmethyl 2-propenoate and (1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis[3,1- propenediyl]nitrilobis(2-hydroxy-3,1-propanediyl)] tetrakis(2-methyl-2-propenoate) (9CI) (CA INDEX NAME)			

CM 1

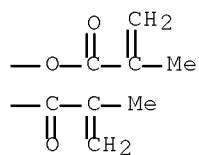
10/579,066

CRN 850309-65-8  
CMF C38 H68 N2 O13 Si2

PAGE 1-A

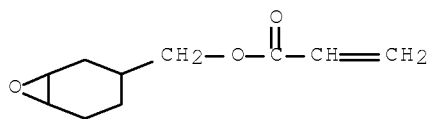


PAGE 1-B



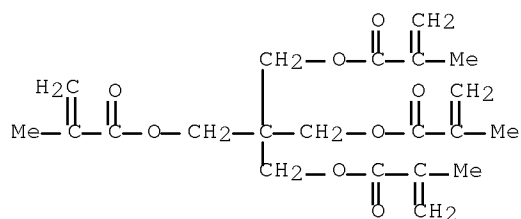
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CRN 64630-63-3  
CMF C10 H14 O3



CM 3

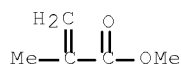
CRN 3253-41-6  
CMF C21 H28 O8



CM 4

CRN 80-62-6

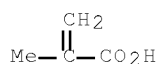
CMF C5 H8 O2



CM 5

CRN 79-41-4

CMF C4 H6 O2



- IC ICM C08L101-00  
ICS C08L033-06; C08L079-08; C08K003-28; G02B005-20
- CC 37-6 (Plastics Manufacture and Processing)  
Section cross-reference(s): 74
- IT Glass substrates  
Light shields  
Liquid crystal displays  
Optical filters  
(black composition containing titanium oxynitride and polyimide or acrylic polymer for color filter in liquid crystal display)
- IT Polyimides, preparation  
(black composition containing titanium oxynitride and polyimide or acrylic polymer for color filter in liquid crystal display)
- IT Polyamic acids  
(black composition containing titanium oxynitride and polyimide or acrylic polymer for color filter in liquid crystal display)
- IT Carbon black, uses  
Silsesquioxanes  
(black composition containing titanium oxynitride and polyimide or acrylic

- polymer for color filter in liquid crystal display)
- IT Polyketones  
(polyamic acid-polyether-, polysiloxane-; black composition containing titanium oxynitride and polyimide or acrylic polymer for color filter in liquid crystal display)
- IT Polysulfones, preparation  
(polyamic acid-polyether-polyketone-polysiloxane-; black composition containing titanium oxynitride and polyimide or acrylic polymer for color filter in liquid crystal display)
- IT Polysiloxanes, preparation  
(polyamic acid-polyether-polyketone-polysulfone-; black composition containing titanium oxynitride and polyimide or acrylic polymer for color filter in liquid crystal display)
- IT Polyketones  
(polyamic acid-polyether-polysiloxane-polysulfone-; black composition containing titanium oxynitride and polyimide or acrylic polymer for color filter in liquid crystal display)
- IT Polyethers, preparation  
(polyamic acid-polyketone-, polysiloxane-; black composition containing titanium oxynitride and polyimide or acrylic polymer for color filter in liquid crystal display)
- IT Polyethers, preparation  
(polyamic acid-polyketone-polysiloxane-polysulfone-; black composition containing titanium oxynitride and polyimide or acrylic polymer for color filter in liquid crystal display)
- IT Polysiloxanes, preparation  
(polyether-polyimide-polyketone-; black composition containing titanium oxynitride and polyimide or acrylic polymer for color filter in liquid crystal display)
- IT Polysiloxanes, preparation  
(polyether-polyimide-polyketone-polysulfone-; black composition containing titanium oxynitride and polyimide or acrylic polymer for color filter in liquid crystal display)
- IT Polysulfones, preparation  
(polyether-polyimide-polyketone-siloxane-; black composition containing titanium oxynitride and polyimide or acrylic polymer for color filter in liquid crystal display)
- IT Polyketones  
(polyether-polyimide-polysulfone-siloxane-; black composition containing titanium oxynitride and polyimide or acrylic polymer for color filter in liquid crystal display)
- IT Polyketones  
(polyether-polyimide-siloxane-; black composition containing titanium oxynitride and polyimide or acrylic polymer for color filter in liquid crystal display)
- IT Polyamic acids  
(polyether-polyketone-, polysiloxane-; black composition containing titanium oxynitride and polyimide or acrylic polymer for color filter in liquid crystal display)
- IT Polyamic acids  
(polyether-polyketone-polysiloxane-polysulfone-; black composition containing titanium oxynitride and polyimide or acrylic polymer for color filter in liquid crystal display)
- IT Polyimides, preparation  
(polyether-polyketone-polysulfone-siloxane-; black composition containing titanium oxynitride and polyimide or acrylic polymer for color filter in liquid crystal display)
- IT Polyimides, preparation



(polyether-polyketone-siloxane-; black composition containing titanium oxynitride and polyimide or acrylic polymer for color filter in liquid crystal display)

- IT Polyethers, preparation  
(polyimide-polyketone-polysulfone-siloxane-; black composition containing titanium oxynitride and polyimide or acrylic polymer for color filter in liquid crystal display)
- IT Polyethers, preparation  
(polyimide-polyketone-siloxane-; black composition containing titanium oxynitride and polyimide or acrylic polymer for color filter in liquid crystal display)
- IT 84329-58-8P, Benzophenonetetracarboxylic dianhydride-bis(3-aminopropyl)tetramethyldisiloxane-4,4'-diaminodiphenyl ether-pyromellitic dianhydride copolymer 187939-39-5P, Benzophenonetetracarboxylic dianhydride-bis(3-aminopropyl)tetramethyldisiloxane-4,4'-diaminodiphenyl ether-3,3'-diaminodiphenylsulfone-maleic anhydride-pyromellitic dianhydride copolymer 477949-88-5P, Cyclomer P-ACA 250-pentaerythritol tetramethacrylate copolymer  
(black composition containing titanium oxynitride and polyimide or acrylic polymer for color filter in liquid crystal display)
- IT 37271-26-4P, Titanium oxynitride 162816-07-1P, Methyltrimethoxysilane-phenyltrimethoxysilane copolymer 850309-66-9P  
(black composition containing titanium oxynitride and polyimide or acrylic polymer for color filter in liquid crystal display)
- IT 7664-41-7, Ammonia, reactions 13463-67-7, Titania, reactions  
(black composition containing titanium oxynitride and polyimide or acrylic polymer for color filter in liquid crystal display)

REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L50 ANSWER 3 OF 35 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2004:1035741 HCAPLUS Full-text

DOCUMENT NUMBER: 142:30180

TITLE: Stable pigment dispersions for curable staining compositions for use in manufacture of color filters

INVENTOR(S): Nakamura, Kazuhiko

PATENT ASSIGNEE(S): Dainippon Printing Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 84 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2004339368	A	20041202	JP 2003-137670	20030515
			<--	
PRIORITY APPLN. INFO.:			JP 2003-137670	20030515
			<--	

ED Entered STN: 03 Dec 2004

AB The dispersions providing high-d. color stain at minimal dispersant use, contain (A) pigments, (B) dispersants which are polymers having structural

units derived from monomers bearing quaternary ammonium salt pendants and structural units derived from specific ester monomers in the absence of acid functional group and polyether chain, (C) copolymers having SP value (method given)  $\geq 10$ , structural units not containing acid functional group and epoxy group-containing structural units as co-dispersants, and (D) organic solvents where the staining compns. contain the dispersions and curable resins. Thus, preparing a diethylene glycol di-Me ether solution containing 32.8% a copolymer of N-phenylmaleimide, benzyl methacrylate and glycidyl methacrylate (acid number  $< 3$  mg-KOH/g; weight-average mol. weight 7700), and mixing 50 parts this solution with C.I. Pigment Yellow 138 30, a dispersant (40% solids content) obtained from benzyl methacrylate-Bu methacrylate-dimethylaminoethyl methacrylate benzyl chloride quaternary ammonium salt-2-ethylhexyl methacrylate-Me methacrylate copolymer 15 and propylene glycol monomethyl ether acetate 205 parts gave a pigment dispersion having good dispersibility for use in color filter manufacture

IT 800377-61-1P

(curable resins; manufacture of pigment dispersions for curable staining compns. for use in manufacture of color filters)

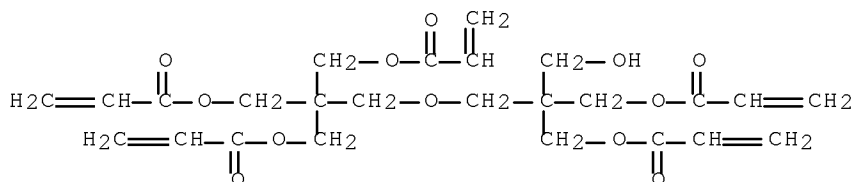
RN 800377-61-1 HCAPLUS

CN	2-Propenoic acid, 2-methyl-, phenylmethyl ester, polymer with 2-[[[3-hydroxy-2,2-bis[[[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate, oxiranylmethyl 2-propenoate and 2-propenoic acid (9CI) (CA INDEX NAME)
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CM 1

CRN 60506-81-2

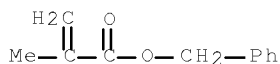
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CM 2

CRN 2495-37-6

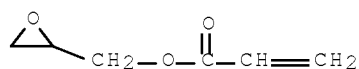
CMF C11 H12 O2



CM 3

CRN 106-90-1

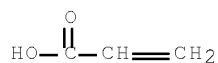
CMF C6 H8 O3



CM 4

CRN 79-10-7

CMF C3 H4 O2



IT 800375-50-2P, Acrylic acid-benzyl methacrylate-glycidyl  
acrylate-TO 1382 copolymer  
(curable resins; manufacture of pigment dispersions for curable staining  
comps. for use in manufacture of color filters)

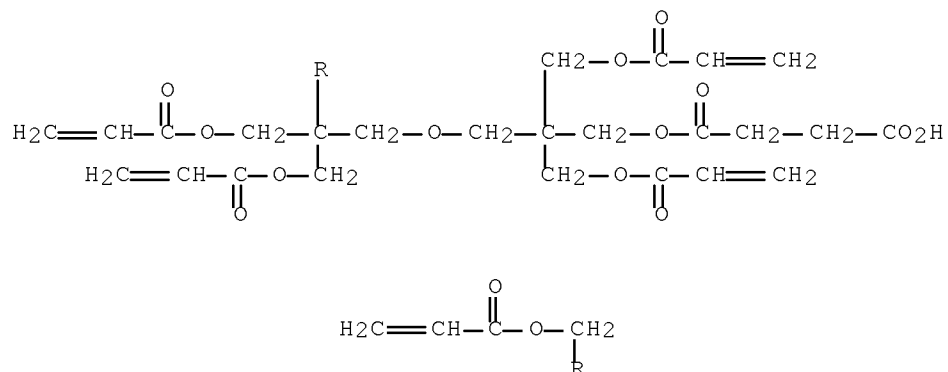
RN 800375-50-2 HCAPLUS

CN Butanedioic acid, 1-[3-[3-[(1-oxo-2-propenyl)oxy]-2,2-bis[[ (1-oxo-2-propenyl)oxy]methyl]propoxy]-2,2-bis[[ (1-oxo-2-propenyl)oxy]methyl]propyl] ester, polymer with 2-oxiranylmethyl 2-propenoate, phenylmethyl 2-methyl-2-propenoate and 2-propenoic acid (CA INDEX NAME)

CM 1

CRN 215806-04-5

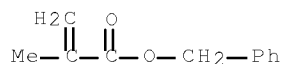
CMF C29 H36 O15



CM 2

CRN 2495-37-6

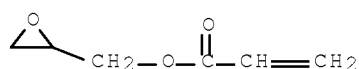
CMF C11 H12 O2



CM 3

CRN 106-90-1

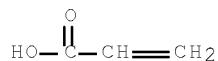
CMF C6 H8 O3



CM 4

CRN 79-10-7

CMF C3 H4 O2



- IC ICM C09D017-00  
ICS B01F017-52; B41M005-00; C08F220-32; C08F291-12; C08F297-00;  
C09B067-20; C09B067-46; C09D011-00; G02B005-20
- CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)  
Section cross-reference(s): 42, 46
- ST phenylmaleimide copolymer dispersant pigment dispersion color  
filter; glycidyl methacrylate copolymer dispersant pigment  
dispersion color filter; benzyl methacrylate  
copolymer dispersant pigment dispersion color filter  
; benzyl methacrylate copolymer dispersant pigment dispersion  
color filter; stain pigment dispersion curable resin  
color filter
- IT Epoxy resins, preparation  
(acrylic; manufacture of pigment dispersions for curable staining  
comps. for use in manufacture of color filters)
- IT Inks  
(jet-printing; manufacture of pigment dispersions for curable staining  
comps. for use in manufacture of color filters)
- IT Binders  
Dispersing agents  
Optical filters  
Photoresists

Pigments, nonbiological

Stains, coloring materials

(manufacture of pigment dispersions for curable staining compns. for use in manufacture of color filters)

- IT 800375-51-3P, Benzyl methacrylate-Epikote 154-glycidyl methacrylate-neopentyl glycol diglycidyl ether-trimellitic acid copolymer 800377-61-1P  
(curable resins; manufacture of pigment dispersions for curable staining compns. for use in manufacture of color filters)
- IT 800375-50-2P, Acrylic acid-benzyl methacrylate-glycidyl acrylate-TO 1382 copolymer  
(curable resins; manufacture of pigment dispersions for curable staining compns. for use in manufacture of color filters)
- IT 51025-73-1P, Glycidyl methacrylate-N-vinyl-2-pyrrolidone copolymer  
87848-87-1P, Glycidyl methacrylate-N-phenylmaleimide copolymer  
731772-54-6P, Benzyl methacrylate-glycidyl methacrylate-N-vinyl-2-pyrrolidone copolymer 800375-44-4P, Benzyl methacrylate-glycidyl methacrylate-N-phenylmaleimide copolymer  
800375-45-5P 800375-46-6P 800375-47-7P, Benzyl methacrylate-glycidyl methacrylate-3-(3-pyridyl)propyl methacrylate copolymer 800375-49-9P, Benzyl methacrylate-Cyclomer M  
100-N-phenylmaleimide copolymer 800379-14-0P 800379-15-1P, Benzyl methacrylate-butyl methacrylate-dimethylaminoethyl methacrylate benzyl chloride quaternary salt-2-ethylhexyl methacrylate-methyl methacrylate copolymer 800379-16-2P  
(dispersant; manufacture of pigment dispersions for curable staining compns. for use in manufacture of color filters)
- IT 477572-63-7, Disperbyk 2000  
(dispersant; manufacture of pigment dispersions for curable staining compns. for use in manufacture of color filters)
- IT 86927-55-1P, 3-(3-Pyridyl)propyl methacrylate 167552-67-2P  
(manufacture of pigment dispersions for curable staining compns. for use in manufacture of color filters)
- IT 2859-67-8, 3-Pyridinepropanol 5036-48-6, 1-(3-Aminopropyl)imidazole  
(manufacture of pigment dispersions for curable staining compns. for use in manufacture of color filters)
- IT 147-14-8, C.I. Pigment Blue 15:6 1328-53-6, C.I. Pigment Green 7  
4051-63-2, C.I. Pigment Red 177 5567-15-7, C.I. Pigment Yellow 83  
14302-13-7, C.I. Pigment Green 36 30125-47-4, C.I. Pigment Yellow 138  
36888-99-0, C.I. Pigment Yellow 139 84632-65-5, C.I. Pigment Red 254  
215247-95-3, C.I. Pigment Violet 23 872613-79-1, C.I. Pigment Yellow 150  
(manufacture of pigment dispersions for curable staining compns. for use in manufacture of color filters)
- IT 920-46-7, Methacrylic chloride  
(manufacture of stable pigment dispersions for curable staining compns. for use in manufacture of color filters)

L50 ANSWER 4 OF 35 HCAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 2004:1035733 HCAPLUS Full-text

DOCUMENT NUMBER: 142:30178

TITLE: Stable pigment dispersions for curable staining compositions for use in manufacture of color filters

INVENTOR(S): Nakamura, Kazuhiko

PATENT ASSIGNEE(S): Dainippon Printing Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 80 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004339358	A	20041202	JP 2003-137511	20030515
			<--	
PRIORITY APPLN. INFO.:			JP 2003-137511	20030515
			<--	

ED Entered STN: 03 Dec 2004

AB The dispersions providing high-d. color stain at minimal dispersant use, contain (A) pigments, (B) dispersants which are polymers having main chain structure at least derived from polymerized diisocyanate or/and triisocyanate compds. and a polyester chain with the absence of acid functional group and polyether chain, (C) copolymers at least having structural units not containing acid functional group having SP value (method given)  $\geq 10$  and epoxy group-containing structural units connected to each and other as co-dispersants and binders, and (D) organic solvents where the staining compns. contain the dispersions and curable resins. Thus, preparing a diethylene glycol di-Me ether solution containing 32.5% a copolymer of N-phenylmaleimide, benzyl methacrylate and glycidyl methacrylate (acid number  $< 3$  mg-KOH/g; weight-average mol. weight 7500), mixing 40 parts this solution with C.I. Pigment Yellow 138 30, a dispersant made from the reaction product of a decanol-initiated polycaprolactone, Desmodur IL, and 1,12-diaminododecane, 30, and propylene glycol monomethyl ether acetate 200 parts gave a pigment dispersion having good dispersibility.

IT 800375-50-2P, Acrylic acid-benzyl methacrylate-glycidyl acrylate-TO 1382 copolymer

(curable resins; manufacture of pigment dispersions for curable staining compns. for use in manufacture of color filters)

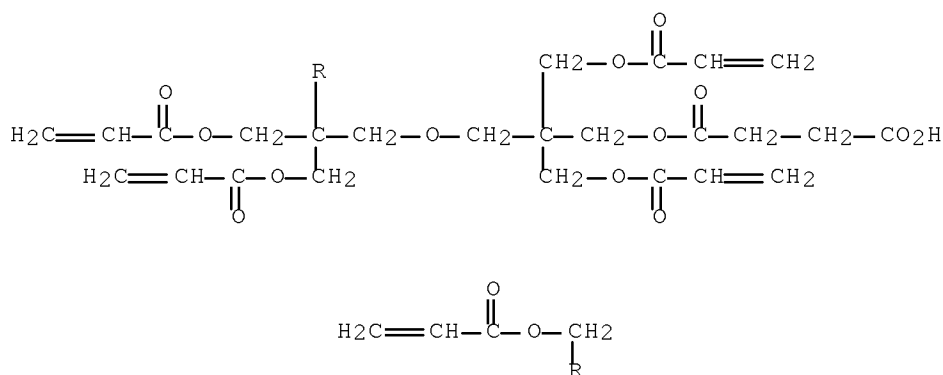
RN 800375-50-2 HCAPLUS

CN Butanedioic acid, 1-[3-[3-[(1-oxo-2-propenyl)oxy]-2,2-bis[[[(1-oxo-2-propenyl)oxy]methyl]propoxy]-2,2-bis[[[(1-oxo-2-propenyl)oxy]methyl]propyl] ester, polymer with 2-oxiranylmethyl 2-propenoate, phenylmethyl 2-methyl-2-propenoate and 2-propenoic acid (CA INDEX NAME)

CM 1

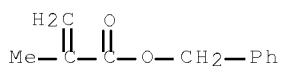
CRN 215806-04-5

CMF C29 H36 O15



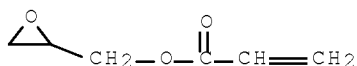
CM 2

CRN 2495-37-6  
 CMF C11 H12 O2



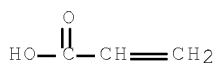
CM 3

CRN 106-90-1  
 CMF C6 H8 O3



CM 4

CRN 79-10-7  
 CMF C3 H4 O2



- IC ICM C09D017-00  
 ICS B01F017-52; B41J002-01; C09B067-20; C09B067-46; C09D011-00;  
 G02B005-20
- CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other  
 Reprographic Processes)  
 Section cross-reference(s): 42, 46
- ST polycaprolactone polyisocyanate copolymer dispersant pigment  
 dispersion color filter; stain pigment dispersion  
 curable resin color filter
- IT Epoxy resins, preparation  
 (acrylic; manufacture of pigment dispersions for curable staining  
 compns. for use in manufacture of color filters)
- IT Inks  
 (jet-printing; manufacture of pigment dispersions for curable staining  
 compns. for use in manufacture of color filters)
- IT Binders  
 Dispersing agents  
 Optical filters

Photoresists

Stains, coloring materials

(manufacture of pigment dispersions for curable staining compns. for use in manufacture of color filters)

- IT Polyurethanes, preparation  
(polyester-; manufacture of pigment dispersions for curable staining compns. for use in manufacture of color filters)
- IT 800375-51-3P, Benzyl methacrylate-Epikote 154-glycidyl methacrylate-neopentyl glycol diglycidyl ether-trimellitic acid copolymer  
(curable resins; manufacture of pigment dispersions for curable staining compns. for use in manufacture of color filters)
- IT 800375-50-2P, Acrylic acid-benzyl methacrylate-glycidyl acrylate-T0 1382 copolymer  
(curable resins; manufacture of pigment dispersions for curable staining compns. for use in manufacture of color filters)
- IT 87848-87-1P, Glycidyl methacrylate-N-phenylmaleimide copolymer  
731772-54-6P, Benzyl methacrylate-glycidyl methacrylate-N-vinyl-2-pyrrolidone copolymer 800375-44-4P, Benzyl methacrylate-glycidyl methacrylate-N-phenylmaleimide copolymer  
800375-45-5P, Glycidyl methacrylate-3-(3-pyridyl)propyl methacrylate copolymer 800375-46-6P 800375-47-7P, Benzyl methacrylate-glycidyl methacrylate-3-(3-pyridyl)propyl methacrylate copolymer 800375-48-8P 800375-49-9P, Benzyl methacrylate-Cyclomer M 100-N-phenylmaleimide copolymer  
(dispersant/binder; manufacture of pigment dispersions for curable staining compns. for use in manufacture of color filters)
- IT 4843-89-4DP, 1,2-Diaminododecane, reaction products with polycaprolactone decyl ester and TDI pentamer  
(dispersant; manufacture of pigment dispersions for curable staining compns. for use in manufacture of color filters)
- IT 154213-94-2, Disperbyk 161  
(dispersant; manufacture of pigment dispersions for curable staining compns. for use in manufacture of color filters)
- IT 54986-73-1DP, Desmodur IL, reaction products with polycaprolactone decyl ester and diamines 104673-46-3DP, reaction products with polyisocyanate and diamines 105009-20-9DP, reaction products with polyisocyanate and diamines 188128-09-8DP, reaction products with polycaprolactone decyl ester and diamines  
(manufacture of pigment dispersions for curable staining compns. for use in manufacture of color filters)
- IT 51025-73-1P, Glycidyl methacrylate-N-vinyl-2-pyrrolidone copolymer  
(manufacture of pigment dispersions for curable staining compns. for use in manufacture of color filters)
- IT 86927-55-1P, 3-(3-Pyridyl)propyl methacrylate 167552-67-2P  
(manufacture of pigment dispersions for curable staining compns. for use in manufacture of color filters)
- IT 920-46-7, Methacrylic chloride 2859-67-8, 3-Pyridinepropanol  
5036-48-6, 1-(3-Aminopropyl)imidazole  
(manufacture of pigment dispersions for curable staining compns. for use in manufacture of color filters)
- IT 147-14-8, C.I. Pigment Blue 15:6 1328-53-6, C.I. Pigment Green 7  
4051-63-2, C.I. Pigment Red 177 5567-15-7, C.I. Pigment Yellow 83  
14302-13-7, C.I. Pigment Green 36 30125-47-4, C.I. Pigment Yellow 138 36888-99-0, C.I. Pigment Yellow 139 84632-65-5, C.I. Pigment Red 254 215247-95-3, C.I. Pigment Violet 23 872613-79-1, C.I. Pigment Yellow 150  
(manufacture of pigment dispersions for curable staining compns. for use in manufacture of color filters)



L50 ANSWER 5 OF 35 HCAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2004:990174 HCAPLUS Full-text  
 DOCUMENT NUMBER: 141:411794  
 TITLE: Colored resin compositions with good transmittance  
 and low voltage reduction effect for color  
 filters and liquid crystal displays  
 INVENTOR(S): Sako, Naoki; Ohata, Tatsuhiro; Tanooka, Hisanaga  
 PATENT ASSIGNEE(S): Mitsubishi Chemical Corp., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 33 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004325968	A	20041118	JP 2003-122853	20030425
<--				
PRIORITY APPLN. INFO.:			JP 2003-122853	20030425
<--				

ED Entered STN: 18 Nov 2004

AB Title compns. comprise colorants, solvents, nitrogen-containing dispersants, and biner resins having not nitrogen atoms, wherein total nitrogen retention ratio of the nitrogen-containing dispersants after heating at 230° for 30 min is ≤60%. Thus, C.I. Pigment Green 36 5.0, C.I. Pigment Yellow 138 5.0, Disper BYK 2001 4.0, and propylene glycol monomethyl ether acetate 86.0% were mixed, 53.0% of the resulting pigment dispersion was mixed with an acrylic acid and tetrahydrophthalic anhydride-modified glycidyl methacrylate-styrene-FA 513M copolymer (preparation given) 23.5, a diacrylate monomer 7.8, trimethylolpropane triacrylate 3.9, and a photoinitiator 11.7%, applied on a glass substrate, heated at 80° for 3 min, irradiated, developed, and baked at 230° for 30 min to give a color filter with good transmittance, high d., and low effect on voltage retention of the liquid crystal display.

IT 760968-91-0P 792966-05-3P

(binder; colored resin compns. with good transmittance and low voltage reduction effect for color filters and liquid crystal displays)

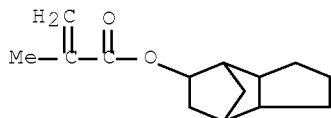
RN 760968-91-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, octahydro-4,7-methano-1H-inden-5-yl ester, polymer with ethenylbenzene,  
 2-ethyl-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate, (1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] di-2-propenoate, oxiranylmethyl  
 2-methyl-2-propenoate, 2-propenoic acid and  
 3a,4,7,7a-tetrahydro-1,3-isobenzofurandione (9CI) (CA INDEX NAME)

CM 1

CRN 34759-34-7

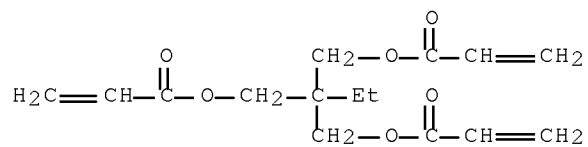
CMF C14 H20 O2



CM 2

CRN 15625-89-5

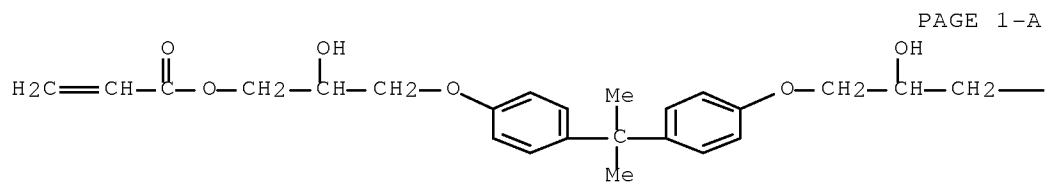
CMF C15 H20 O6



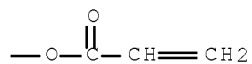
CM 3

CRN 4687-94-9

CMF C27 H32 O8



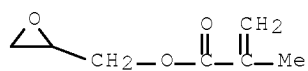
PAGE 1-B



CM 4

CRN 106-91-2

CMF C7 H10 O3

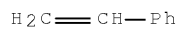


10/579,066

CM 5

CRN 100-42-5

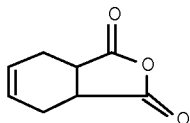
CMF C8 H8



CM 6

CRN 85-43-8

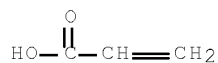
CMF C8 H8 O3



CM 7

CRN 79-10-7

CMF C3 H4 O2



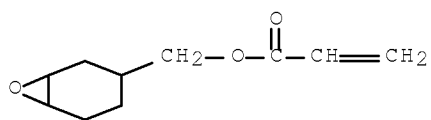
RN 792966-05-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with  
2-ethyl-2-[[ (1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl  
di-2-propenoate, 2-hydroxyethyl 2-methyl-2-propenoate,  
(1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)]  
di-2-propenoate, methyl 2-methyl-2-propenoate,  
7-oxabicyclo[4.1.0]hept-3-ylmethyl 2-propenoate and phenylmethyl  
2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 64630-63-3

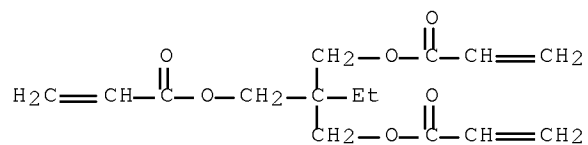
CMF C10 H14 O3



CM 2

CRN 15625-89-5

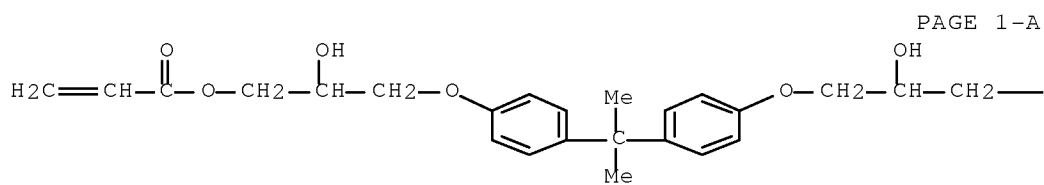
CMF C15 H20 O6



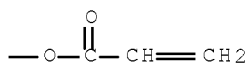
CM 3

CRN 4687-94-9

CMF C27 H32 O8



PAGE 1-A

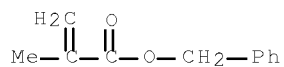


PAGE 1-B

CM 4

CRN 2495-37-6

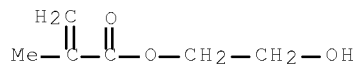
CMF C11 H12 O2



CM 5

CRN 868-77-9

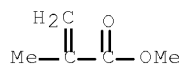
CMF C6 H10 O3



CM 6

CRN 80-62-6

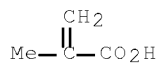
CMF C5 H8 O2



CM 7

CRN 79-41-4

CMF C4 H6 O2



IC ICM G02B005-20  
 ICS C08K005-00; C08L101-00; G03F007-004; G03F007-038  
 CC 37-6 (Plastics Manufacture and Processing)  
 Section cross-reference(s): 38, 74  
 ST colored resin compn transmittance voltage redn effect color  
 filter; pigment Disper BYK binder compn color  
 filter prepn  
 IT Binders  
 Coloring materials  
 Dispersing agents  
 Glass substrates  
 Liquid crystal displays  
 Optical filters  
 Pigments, nonbiological

- (colored resin compns. with good transmittance and low voltage reduction effect for color filters and liquid crystal displays)
- IT 760968-91-0P 792966-05-3P  
(binder; colored resin compns. with good transmittance and low voltage reduction effect for color filters and liquid crystal displays)
- IT 79-10-7DP, Acrylic acid, reaction products with epoxy-containing acrylic copolymers and tetrahydrophthalic anhydride  
(colored resin compns. with good transmittance and low voltage reduction effect for color filters and liquid crystal displays)
- IT 460741-05-3, Disperbyk 2001  
(dispersant; colored resin compns. with good transmittance and low voltage reduction effect for color filters and liquid crystal displays)
- IT 85-43-8DP, Tetrahydrophthalic anhydride, reaction products with epoxy-containing acrylic copolymers and acrylic acid 492462-48-3P, Benzyl methacrylate-2-hydroxyethyl methacrylate-methacrylic acid-methyl methacrylate copolymer ester with (3,4-epoxycyclohexyl)methyl acrylate 760972-28-9DP, reaction products with acrylic acid and tetrahydrophthalic anhydride  
(intermediate for binder; colored resin compns. with good transmittance and low voltage reduction effect for color filters and liquid crystal displays)
- IT 14302-13-7, C.I. Pigment Green 36 30125-47-4, C.I. Pigment Yellow 138  
(pigment; colored resin compns. with good transmittance and low voltage reduction effect for color filters and liquid crystal displays)

L50 ANSWER 6 OF 35 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2004:842675 HCAPLUS Full-text

DOCUMENT NUMBER: 141:358193

TITLE: Pigment dispersion for color resist, photosensitive color composition, and color filter

INVENTOR(S): Nakamura, Kazuhiko; Taguchi, Hiromu; Hasegawa, Mitsutaka

PATENT ASSIGNEE(S): Dainippon Printing Co., Ltd., Japan; Toa Gosei Chemical Industry Co., Ltd.

SOURCE: Jpn. Kokai Tokkyo Koho, 67 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

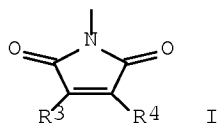
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2004287364	A	20041014	JP 2003-124540	20030324
			<--	
JP 4195328	B2	20081210		
PRIORITY APPLN. INFO.:			JP 2003-124540	20030324
			<--	

ED Entered STN: 15 Oct 2004

GI



AB Disclosed is the pigment dispersion comprising a pigment, an organic solvent, an imide-based copolymer having a structural unit I (R<sub>3,4</sub> = C<sub>≤4</sub> alkyl), a structural unit having an acid functional group, and a structural unit having a photohardenable group but I, and a pigment dispersing agent which is made from a polymer having the backbone structure containing diisocyanate and/or triisocyanate, a polyester chain, and a polymer free of an acid group and a polyether chain.

IT 775318-35-9P 775318-36-0P 775318-37-1P  
(pigment dispersion for color resist)

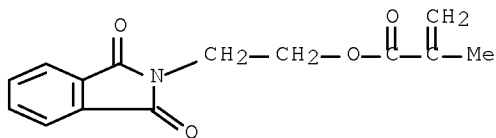
RN 775318-35-9 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-(1,3-dihydro-1,3-dioxo-2H-isoindol-2-yl)ethyl ester, polymer with oxiranylmethyl 2-methyl-2-propenoate, phenylmethyl 2-methyl-2-propenoate and 2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 18791-05-4

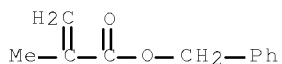
CMF C14 H13 N O4



CM 2

CRN 2495-37-6

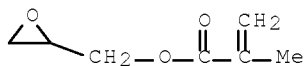
CMF C11 H12 O2



CM 3

CRN 106-91-2

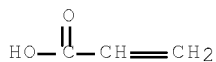
CMF C7 H10 O3



CM 4

CRN 79-10-7

CMF C3 H4 O2



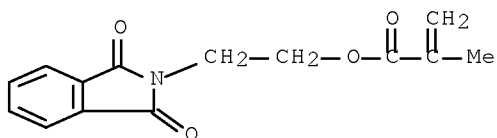
RN 775318-36-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-(1,3-dihydro-1,3-dioxo-2H-isoindol-2-yl)ethyl ester, polymer with oxiranylmethyl 2-methyl-2-propenoate and 2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 18791-05-4

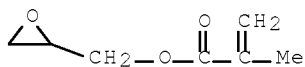
CMF C14 H13 N O4



CM 2

CRN 106-91-2

CMF C7 H10 O3

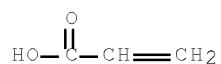


CM 3

CRN 79-10-7



CMF C3 H4 O2



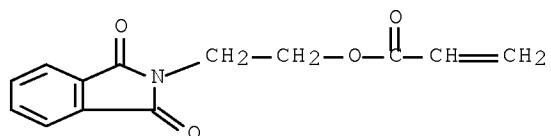
RN 775318-37-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, oxiranylmethyl ester, polymer with  
 2-(1,3-dihydro-1,3-dioxo-2H-isoindol-2-yl)ethyl 2-propenoate,  
 phenylmethyl 2-methyl-2-propenoate and 2-propenoic acid (9CI) (CA  
 INDEX NAME)

CM 1

CRN 15458-78-3

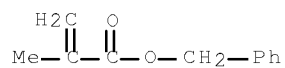
CMF C13 H11 N O4



CM 2

CRN 2495-37-6

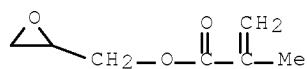
CMF C11 H12 O2



CM 3

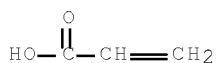
CRN 106-91-2

CMF C7 H10 O3



CM 4

CRN 79-10-7  
CMF C3 H4 O2



IC ICM G03F007-004  
ICS C08G018-42; C08L075-06; C09B067-20; C09B067-46; C09D017-00;  
G02B005-20; G02B005-22; G03F007-038  
CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)  
Section cross-reference(s): 35, 38  
IT Optical filters  
Photoimaging materials  
Photoresists  
Resists  
(pigment dispersion for color resist)  
IT 100601-62-5P, Caprolactone-1,12-diaminododecane-Desmodur IL copolymer  
775318-35-9P 775318-36-0P 775318-37-1P  
(pigment dispersion for color resist)

L50 ANSWER 7 OF 35 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2004:837666 HCAPLUS Full-text

DOCUMENT NUMBER: 141:340378

TITLE: Pigment dispersions for colored resists,  
photosensitive colored compositions, and  
~~color filters~~ from them with  
excellent surface smoothness, electric  
reliability, and color reproducibility

INVENTOR(S): Nakamura, Kazuhiko; Otsuka, Yoshimasa

PATENT ASSIGNEE(S): Dainippon Printing Co., Ltd., Japan; The Inctec  
Inc.

SOURCE: Jpn. Kokai Tokkyo Koho, 70 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2004287366	A	20041014	JP 2003-124544	20030324
			<--	
PRIORITY APPLN. INFO.:			JP 2003-124544	20030324
			<--	

ED Entered STN: 14 Oct 2004

AB The dispersions or compns. contain pigments (A), dispersants (B) of polymers consisting of units CH<sub>2</sub>C(XN+RaRbRc)Rd.Y- [Ra-c = H, (un)substituted cyclic or linear hydrocarbyl; ≥2 of Ra-c may form ring; Rd = H, Me; X = divalent linking group; Y- = counter anion] and units CH<sub>2</sub>CRe(C:OORf) [Re = H, Me; Rf = (un)substituted cyclic or linear alkyl, aryl, aralkyl] and bearing no ether chains or no acidic functional groups, copolymers (C) consisting of units bearing acidic functional groups, units bearing photocurable groups, and acidic group-free units with SP value ≥10, and organic solvents (D).

IT 773145-21-4P 773145-23-6P 773145-28-1P  
 773145-31-6P 773145-33-8P 773145-35-0P  
 (dispersing aid; pigment compns. containing certain copolymer  
 dispersants and certain copolymer dispersing aids for color  
 filters with good surface smoothness and elec. reliability)

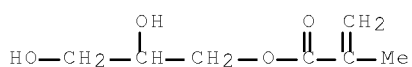
RN 773145-21-4 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, phenylmethyl ester, polymer with  
 1-phenyl-1H-pyrrole-2,5-dione and 2-propenoic acid,  
 2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl ester (9CI) (CA  
 INDEX NAME)

CM 1

CRN 5919-74-4

CMF C7 H12 O4



CM 2

CRN 773145-20-3

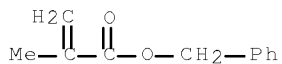
CMF (C11 H12 O2 . C10 H7 N O2 . C3 H4 O2)x

CCI PMS

CM 3

CRN 2495-37-6

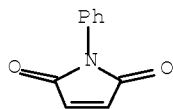
CMF C11 H12 O2



CM 4

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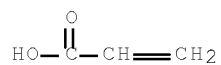
CMF C10 H7 N O2



CM 5

10/579,066

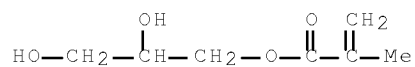
CRN 79-10-7  
CMF C3 H4 O2



RN 773145-23-6 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, phenylmethyl ester, polymer with  
N-[3-(1H-imidazol-1-yl)propyl]-2-methyl-2-propenamide and 2-propenoic  
acid, 2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl ester (9CI)  
(CA INDEX NAME)

CM 1

CRN 5919-74-4  
CMF C7 H12 O4

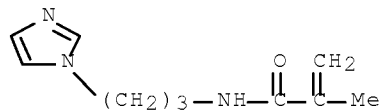


CM 2

CRN 773145-22-5  
CMF (C11 H12 O2 . C10 H15 N3 O . C3 H4 O2)x  
CCI PMS

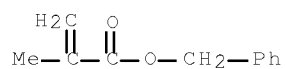
CM 3

CRN 167552-67-2  
CMF C10 H15 N3 O



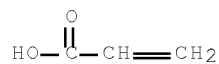
CM 4

CRN 2495-37-6  
CMF C11 H12 O2



CM 5

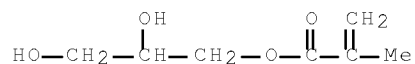
CRN 79-10-7  
CMF C3 H4 O2



RN 773145-28-1 HCAPLUS  
CN 2-Propenoic acid, polymer with 1-phenyl-1H-pyrrole-2,5-dione,  
2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl ester (9CI) (CA  
INDEX NAME)

CM 1

CRN 5919-74-4  
CMF C7 H12 O4

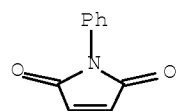


CM 2

CRN 773145-27-0  
CMF (C10 H7 N O2 . C3 H4 O2)x  
CCI PMS

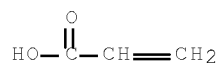
CM 3

CRN 941-69-5  
CMF C10 H7 N O2



CM 4

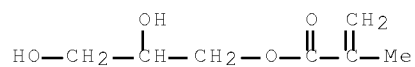
CRN 79-10-7  
CMF C3 H4 O2



RN 773145-31-6 HCAPLUS  
CN 2-Propenoic acid, polymer with 1-ethenyl-2-pyrrolidinone and  
1-phenyl-1H-pyrrole-2,5-dione,  
2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl ester (9CI) (CA  
INDEX NAME)

CM 1

CRN 5919-74-4  
CMF C7 H12 O4

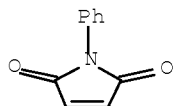


CM 2

CRN 773145-30-5  
CMF (C10 H7 N O2 . C6 H9 N O . C3 H4 O2)x  
CCI PMS

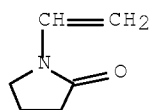
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CRN 941-69-5  
CMF C10 H7 N O2



CM 4

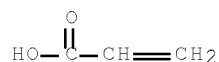
CRN 88-12-0  
CMF C6 H9 N O



CM 5

CRN 79-10-7

CMF C3 H4 O2



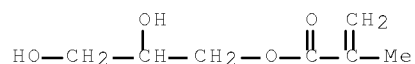
RN 773145-33-8 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-(3-pyridinyl)propyl ester, polymer with  
2-propenoic acid, 2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl  
ester (9CI) (CA INDEX NAME)

CM 1

CRN 5919-74-4

CMF C7 H12 O4



CM 2

CRN 773145-32-7

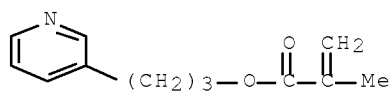
CMF (C12 H15 N O2 . C3 H4 O2) x

CCI PMS

CM 3

CRN 86927-55-1

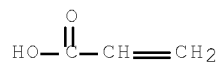
CMF C12 H15 N O2



10/579,066

CM 4

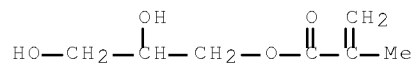
CRN 79-10-7  
CMF C3 H4 O2



RN 773145-35-0 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, phenylmethyl ester, polymer with  
2-propenoic acid and 3-(3-pyridinyl)propyl 2-methyl-2-propenoate,  
2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl ester (9CI) (CA  
INDEX NAME)

CM 1

CRN 5919-74-4  
CMF C7 H12 O4

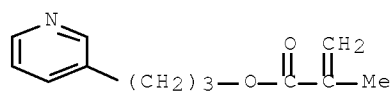


CM 2

CRN 773145-34-9  
CMF (C12 H15 N O2 . C11 H12 O2 . C3 H4 O2)x  
CCI PMS

CM 3

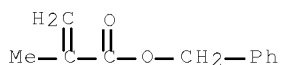
CRN 86927-55-1  
CMF C12 H15 N O2



CM 4

CRN 2495-37-6  
CMF C11 H12 O2

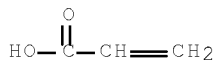




CM 5

CRN 79-10-7

CMF C3 H4 O2



- IC ICM G03F007-004  
ICS C08F290-12; C09B067-20; C09B067-46; G02B005-20; G02B005-22;  
G03F007-038
- CC 74-4 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)  
Section cross-reference(s): 38
- ST dispersing aid pyridylpropyl methacrylate copolymer; color  
filter pigment elec reliability LCD; pigment dispersibility  
quaternary ammonium polymer dispersant
- IT Dispersing agents  
Liquid crystal displays  
Optical filters  
Photoimaging materials  
Pigments, nonbiological  
(pigment compns. containing certain copolymer dispersants and certain  
copolymer dispersing aids for color filters  
with good surface smoothness and elec. reliability)
- IT 773145-21-4P 773145-23-6P 773145-28-1P  
773145-31-6P 773145-33-8P 773145-35-0P  
(dispersing aid; pigment compns. containing certain copolymer  
dispersants and certain copolymer dispersing aids for color  
filters with good surface smoothness and elec. reliability)
- IT 920-46-7, Methacrylic chloride 2859-67-8, 3-Pyridinepropanol  
5036-48-6, 1-(3-Aminopropyl)imidazole  
(for dispersing aid preparation; pigment compns. containing certain  
copolymer dispersants and certain copolymer dispersing aids for  
color filters with good surface smoothness and  
elec. reliability)
- IT 86927-55-1P 167552-67-2P  
(monomer, for dispersing aid preparation; pigment compns. containing  
certain  
copolymer dispersants and certain copolymer dispersing aids for  
color filters with good surface smoothness and  
elec. reliability)
- IT 60506-81-2, Dipentaerythritol pentaacrylate 215806-04-5, TO 1382  
(photosensitive composition containing; pigment compns. containing certain  
copolymer dispersants and certain copolymer dispersing aids for  
color filters with good surface smoothness and  
elec. reliability)
- IT 773144-41-5P 773144-43-7P 773144-44-8P  
(pigment dispersant; pigment compns. containing certain copolymer

dispersants and certain copolymer dispersing aids for color filters with good surface smoothness and elec. reliability)

IT 477572-63-7, Disperbyk 2000

(pigment dispersant; pigment compns. containing certain copolymer dispersants and certain copolymer dispersing aids for color filters with good surface smoothness and elec. reliability)

IT 147-14-8, C.I. Pigment Blue 15:6 1328-53-6, C.I. Pigment Green 7  
4051-63-2, C.I. Pigment Red 177 5567-15-7, C.I. Pigment Yellow 83  
14302-13-7, C.I. Pigment Green 36 30125-47-4, C.I. Pigment Yellow  
138 36888-99-0, C.I. Pigment Yellow 139 84632-65-5, C.I. Pigment  
Red 254 112540-76-8, Titanium black 215247-95-3, C.I. Pigment  
Violet 23 872613-79-1, C.I. Pigment Yellow 150  
(pigment; compns. containing certain copolymer dispersants and certain  
copolymer dispersing aids for color filters  
with good surface smoothness and elec. reliability)

L50 ANSWER 8 OF 35 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2004:824148 HCAPLUS Full-text

DOCUMENT NUMBER: 141:340541

TITLE: Curable resin composition, photosensitive  
pattern-forming curable resin composition,  
color filter, substrate for  
liquid crystalline panel, and liquid crystalline  
panel

INVENTOR(S): Hayashi, Shinji; Sega, Shunsuke; Taguchi, Hiromu;  
Hasegawa, Mitsutaka

PATENT ASSIGNEE(S): Dai Nippon Printing Co. Ltd., Japan

SOURCE: PCT Int. Appl., 144 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004086145	A1	20041007	WO 2004-JP4001	20040324
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JP 2004287227	A	20041014	JP 2003-80943	20030324
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JP 2004285271	A	20041014	JP 2003-80977	20030324
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US 20060229376	A1	20061012	US 2005-550577	20050922

JP 2009064023	A	20090326	JP 2008-244248	20080924
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PRIORITY APPLN. INFO.:			JP 2003-80943	A 20030324
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			JP 2003-80991	A 20030324
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			WO 2004-JP4001	W 20040324

ED Entered STN: 08 Oct 2004

AB The invention relates to a curable resin composition, characterized in that it comprises (a) a copolymer having a mol. structure wherein a constitutional unit having an acidic functional group and a constitutional unit having a photocurable functional group are connected, (b) a photopolymn. initiator having a ~~tertiary amine~~ structure and (c) a photocurable compound having one or more acidic functional groups and three or more photocurable functional groups; a substrate for a liquid crystalline panel having a protective layer for covering a coloring layer or a spacer for a liquid crystalline layer which is formed by using said curable resin composition; and a liquid crystalline panel using said substrate. The resin composition exhibits high exposure sensitivity and good developing properties and capable of forming a precise and accurate pattern, the substrate is reduced in the inconsistencies in color or contrast, and the panel exhibits excellent quality of display.

IT 114921-38-9P, Methyl methacrylate-methacrylic acid copolymer  
glycidyl methacrylate ester 544416-50-4P  
(resin in curable resin composition)

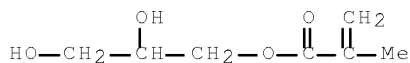
RN 114921-38-9 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with methyl  
2-methyl-2-propenoate, 2-hydroxy-3-[(2-methyl-1-oxo-2-propen-1-yl)oxy]propyl ester (CA INDEX NAME)

CM 1

CRN 5919-74-4

CMF C7 H12 O4



CM 2

CRN 25086-15-1

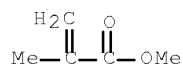
CMF (C5 H8 O2 . C4 H6 O2)x

CCI PMS

CM 3

CRN 80-62-6

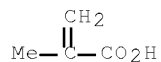
CMF C5 H8 O2



CM 4

CRN 79-41-4

CMF C4 H6 O2



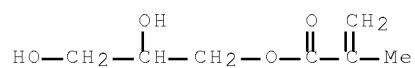
RN 544416-50-4 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with  
 2-(1,3,4,5,6,7-hexahydro-1,3-dioxo-2H-isoindol-2-yl)ethyl  
 2-methyl-2-propenoate, 2-hydroxy-3-[(2-methyl-1-oxo-2-  
 propenyl)oxy]propyl ester (9CI) (CA INDEX NAME)

CM 1

CRN 5919-74-4

CMF C7 H12 O4



CM 2

CRN 77945-63-2

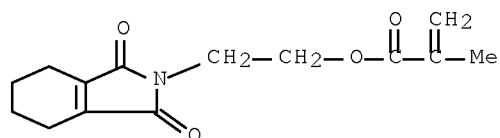
CMF (C14 H17 N O4 . C4 H6 O2) x

CCI PMS

CM 3

CRN 77945-62-1

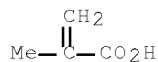
CMF C14 H17 N O4



CM 4

CRN 79-41-4

CMF C4 H6 O2



IC ICM G03F007-038  
ICS G03F007-027; G02B005-20; G02F001-1335  
CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 35  
ST curable resin compn photosensitive color filter  
liq cryst  
IT Liquid crystal displays  
Optical filters  
(curable resin composition, photosensitive pattern-forming curable resin composition, color filter, substrate for liquid crystalline panel, and liquid crystalline panel)  
IT 30674-80-7DP, 2-(Methacryloyloxy)ethyl isocyanate, reaction product with acrylic polymer 114921-38-9P, Methyl methacrylate-methacrylic acid copolymer glycidyl methacrylate ester 197773-90-3DP, Benzyl methacrylate/styrene/acrylic acid/2-hydroxyethyl methacrylate copolymer, reaction product with 2-(methacryloyloxy)ethyl isocyanate 544416-50-4P  
(resin in curable resin composition)  
REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L50 ANSWER 9 OF 35 HCAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 2004:780753 HCAPLUS Full-text  
DOCUMENT NUMBER: 141:285563  
TITLE: Coloring resin composition, color filter, and liquid-crystal display  
INVENTOR(S): Sako, Naoki; Ohata, Tatsuhiro; Tanikawa, Keiko; Naruto, Toshiya; Tanooka, Hisanaga; Nagao, Takumi; Kawana, Shin  
PATENT ASSIGNEE(S): Mitsubishi Chemical Corporation, Japan  
SOURCE: PCT Int. Appl., 167 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004081070	A1	20040923	WO 2004-JP331	20040116

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10/579,066

MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE,  
 SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC,  
 VN, YU, ZA, ZM, ZW  
 RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM,  
 AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE,  
 DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,  
 SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,  
 MR, NE, SN, TD, TG

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			JP 2003-124291	A 20030428
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			JP 2002-210065	A 20020718
			<--	
			CN 2004-80009124	A3 20040116
			JP 2004-9772	A3 20040116

ED Entered STN: 24 Sep 2004

AB A coloring resin composition which has satisfactory transparency, is less apt to leave a coloring resin composition residue remaining undissolved in the nonimage areas on a substrate, and has excellent adhesion to the substrate. It is inhibited from generating foreign matters such as dried agglomerates in application by die coating and is capable of evenly forming color pixels with a high d. The coloring resin composition comprises a colorant, a solvent, a dispersant, and a binder resin, and is characterized in that the binder resin comprises a nitrogen-free binder resin having a structure formed by causing the epoxy group of an epoxidized unsatd. compound to add to each of carboxy groups of a carboxylated resin and the dispersant comprises a nitrogenous dispersant, the proportion of the nitrogenous dispersant to the colorant being 0.01 to 0.5. Thus, styrene 20, glycidyl methacrylate 57, and FA 513M tricyclodecane structure-containing monoacrylate 82 parts were stirred at 120° for 2 h, acrylic acid 27, trisdimethylaminomethylphenol 0.7, and hydroquinone 0.12 parts were added therein and reacted at 120° for 6 h, 52 parts tetrahydrophthalic anhydride and 0.7 parts triethylamine were added therein and reacted at 120° for 3.5 h to give a binder resin with Mw 150,000, 6.5 parts of which was mixed with red colorant 10.0, solvent 127.0, dispersant (preparation given) 6.25, succinic anhydride 0.35, bisphenol A diglycidyl ether diacrylate 3.25, trimethylolpropane triacrylate 3.25, 2-

10/579,066

mercaptobenzothiazole 0.83, Me p-dimethylaminobenzoate 0.83, and Michler's ketone 0.83 parts, applied on a black matrix-attached glass substrate, irradiated with a high pressure mercury lamp through a neg. photomask, developed, washed, heat-cured at 230° for 7 min, and repeated the same process using a blue colorant resin composition and green colorant resin composition to give a color filter with good appearance, reflectance 98% at 500 n, 99% at 450 nm, and 98% at 550 nm.

IT 760968-92-1P 760968-94-3P 760968-95-4P  
760968-96-5P

(binder; coloring resin compns. for color filters  
and liquid-crystal displays)

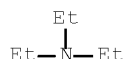
RN 760968-92-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, octahydro-4,7-methano-1H-inden-5-yl  
ester, polymer with ethenylbenzene,  
2-ethyl-2-[[ (1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl  
di-2-propenoate, (1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-  
3,1-propanediyl)] di-2-propenoate, oxiranylmethyl  
2-methyl-2-propenoate, 2-propenoic acid and  
3a,4,7,7a-tetrahydro-1,3-isobenzofurandione, compd. with  
N,N-diethylethanamine (9CI) (CA INDEX NAME)

CM 1

CRN 121-44-8

CMF C6 H15 N



CM 2

CRN 760968-91-0

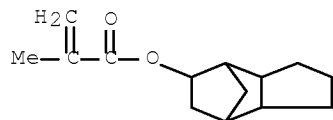
CMF (C27 H32 O8 . C15 H20 O6 . C14 H20 O2 . C8 H8 O3 . C8 H8 . C7 H10  
O3 . C3 H4 O2)x

CCI PMS

CM 3

CRN 34759-34-7

CMF C14 H20 O2

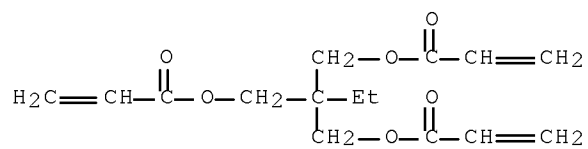


CM 4

CRN 15625-89-5

10/579,066

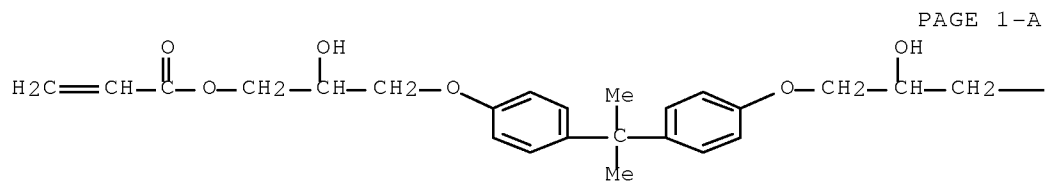
CMF C15 H20 O6



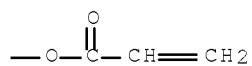
CM 5

CRN 4687-94-9

CMF C27 H32 O8



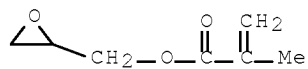
PAGE 1-B



CM 6

CRN 106-91-2

CMF C7 H10 O3

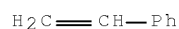


CM 7

CRN 100-42-5

CMF C8 H8

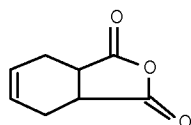




CM 8

CRN 85-43-8

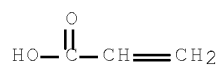
CMF C8 H8 O3



CM 9

CRN 79-10-7

CMF C3 H4 O2



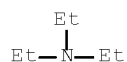
RN 760968-94-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with  
 2-ethyl-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl  
 di-2-propenoate, (1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-  
 3,1-propanediyl)] di-2-propenoate, octahydro-4,7-methano-1H-inden-5-yl  
 2-methyl-2-propenoate, oxiranylmethyl 2-methyl-2-propenoate,  
 phenylmethyl 2-methyl-2-propenoate, 2-propenoic acid and  
 3a,4,7,7a-tetrahydro-1,3-isobenzofurandione, compd. with  
 N,N-diethylethanamine (9CI) (CA INDEX NAME)

CM 1

CRN 121-44-8

CMF C6 H15 N



CM 2

10/579,066

CRN 760968-93-2

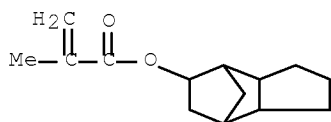
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CCI PMS

CM 3

CRN 34759-34-7

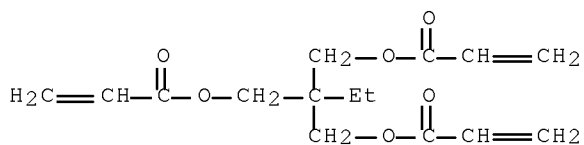
CMF C14 H20 O2



CM 4

CRN 15625-89-5

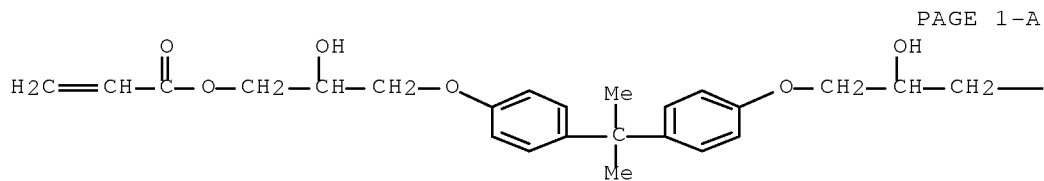
CMF C15 H20 O6



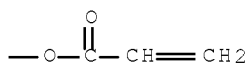
CM 5

CRN 4687-94-9

CMF C27 H32 O8



PAGE 1-A

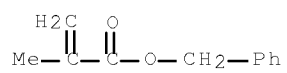


PAGE 1-B

CM 6

CRN 2495-37-6

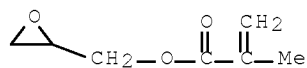
CMF C11 H12 O2



CM 7

CRN 106-91-2

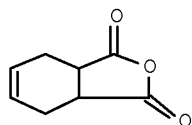
CMF C7 H10 O3



CM 8

CRN 85-43-8

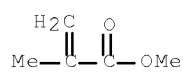
CMF C8 H8 O3



CM 9

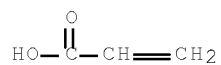
CRN 80-62-6

CMF C5 H8 O2



CM 10

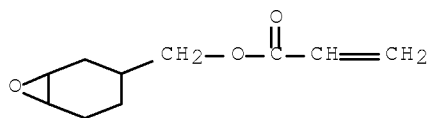
CRN 79-10-7  
CMF C3 H4 O2



RN 760968-95-4 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, polymer with ethenylbenzene,  
2-ethyl-2-[[ (1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl  
di-2-propenoate, (1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-  
3,1-propanediyl)] di-2-propenoate and  
7-oxabicyclo[4.1.0]hept-3-ylmethyl 2-propenoate (9CI) (CA INDEX NAME)

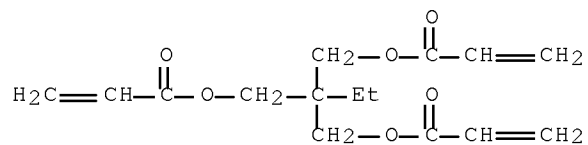
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CRN 64630-63-3  
CMF C10 H14 O3



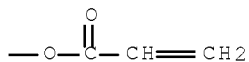
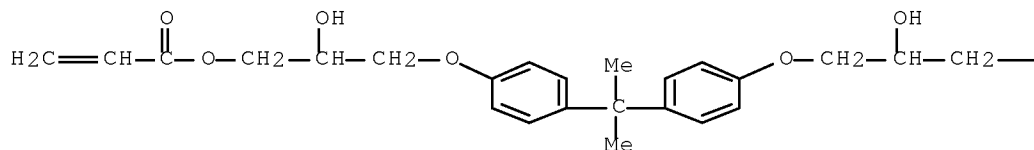
CM 2

CRN 15625-89-5  
CMF C15 H20 O6



CM 3

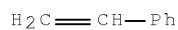
CRN 4687-94-9  
CMF C27 H32 O8



CM 4

CRN 100-42-5

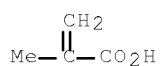
CMF C8 H8



CM 5

CRN 79-41-4

CMF C4 H6 O2



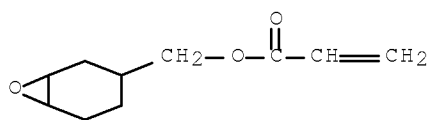
RN 760968-96-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with  
 2-ethyl-2-[[ (1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl  
 di-2-propenoate, (1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-  
 3,1-propanediyl)] di-2-propenoate, methyl 2-methyl-2-propenoate,  
 7-oxabicyclo[4.1.0]hept-3-ylmethyl 2-propenoate and phenylmethyl  
 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 64630-63-3

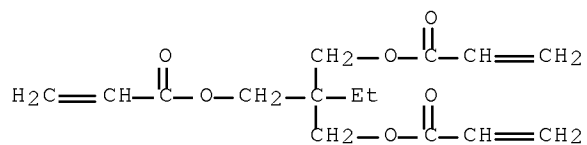
CMF C10 H14 O3



CM 2

CRN 15625-89-5

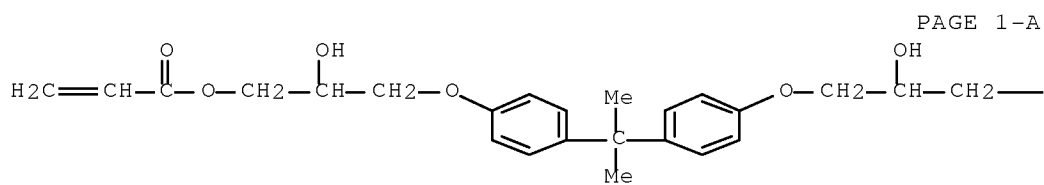
CMF C15 H20 O6



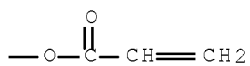
CM 3

CRN 4687-94-9

CMF C27 H32 O8



PAGE 1-A

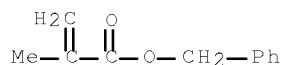


PAGE 1-B

CM 4

CRN 2495-37-6

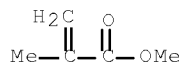
CMF C11 H12 O2



CM 5

CRN 80-62-6

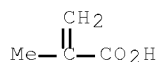
CMF C5 H8 O2



CM 6

CRN 79-41-4

CMF C4 H6 O2



IT 760972-30-3P, FA 513M-glycidyl methacrylate-styrene copolymer  
 acrylate tetrahydrophthalate triethylamine salt 760972-33-6P  
 , Benzyl methacrylate-FA 513M-glycidyl methacrylate-methyl  
 methacrylate copolymer acrylate tetrahydrophthalate triethylamine salt  
 (intermediate for binder; coloring resin compns. for color  
 filters and liquid-crystal displays)

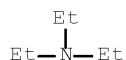
RN 760972-30-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, octahydro-4,7-methano-1H-inden-5-yl  
 ester, polymer with ethenylbenzene and 2-oxiranylmethyl  
 2-methyl-2-propenoate, hydrogen 4-cyclohexene-1,2-dicarboxylate  
 2-propenoate, compd. with N,N-diethylethanamine (CA INDEX NAME)

CM 1

CRN 121-44-8

CMF C6 H15 N



CM 2

10/579,066

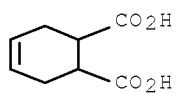
CRN 760972-29-0

CMF (C14 H20 O2 . C8 H8 . C7 H10 O3)x . x C8 H10 O4 . x C3 H4 O2

CM 3

CRN 88-98-2

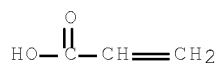
CMF C8 H10 O4



CM 4

CRN 79-10-7

CMF C3 H4 O2



CM 5

CRN 760972-28-9

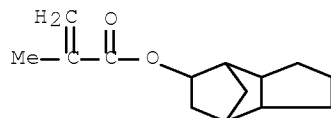
CMF (C14 H20 O2 . C8 H8 . C7 H10 O3)x

CCI PMS

CM 6

CRN 34759-34-7

CMF C14 H20 O2

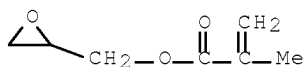


CM 7

CRN 106-91-2

CMF C7 H10 O3

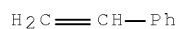




CM 8

CRN 100-42-5

CMF C8 H8



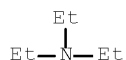
RN 760972-33-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with methyl octahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate, oxiranylmethyl 2-methyl-2-propenoate and phenylmethyl 2-methyl-2-propenoate, hydrogen 4-cyclohexene-1,2-dicarboxylate 2-propenoate, compd. with N,N-diethylethanamine (9CI) (CA INDEX NAME)

CM 1

CRN 121-44-8

CMF C6 H15 N



CM 2

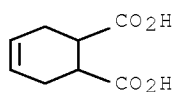
CRN 760972-32-5

CMF (C14 H20 O2 . C11 H12 O2 . C7 H10 O3 . C5 H8 O2)x . x C8 H10 O4 .  
x C3 H4 O2

CM 3

CRN 88-98-2

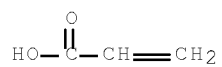
CMF C8 H10 O4



10/579,066

CM 4

CRN 79-10-7  
CMF C3 H4 O2

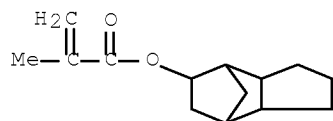


CM 5

CRN 760972-31-4  
CMF (C14 H20 O2 . C11 H12 O2 . C7 H10 O3 . C5 H8 O2)x  
CCI PMS

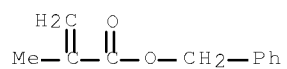
CM 6

CRN 34759-34-7  
CMF C14 H20 O2



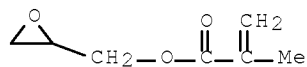
CM 7

CRN 2495-37-6  
CMF C11 H12 O2



CM 8

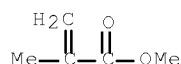
CRN 106-91-2  
CMF C7 H10 O3



CM 9

CRN 80-62-6

CMF C5 H8 O2



- IC ICM C08F299-00  
ICS G02B005-20
- CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)  
Section cross-reference(s): 38, 74
- ST coloring resin compn color filter liq crystal display; epoxy tricyclodecane contg acrylic copolymer biner prepn; binder colorant dispersant compn resist color filter prepn
- IT Quaternary ammonium compounds, uses  
(block copolymers containing, colorant dispersants; coloring resin compns. for color filters and liquid-crystal displays)
- IT Polymers, uses  
(block, quaternary ammonium-containing, colorant dispersants; coloring resin compns. for color filters and liquid-crystal displays)
- IT Polyoxyalkylenes, uses  
(colorant dispersants, reaction products with polyisocyanates, polycaprolactone monoalkyl esters, and diamines; coloring resin compns. for color filters and liquid-crystal displays)
- IT Acrylic polymers, uses  
Phosphates, uses  
Polyurethanes, uses  
(colorant dispersants; coloring resin compns. for color filters and liquid-crystal displays)
- IT Dispersing agents  
(colorant; coloring resin compns. for color filters and liquid-crystal displays)
- IT Binders  
Coloring materials  
Liquid crystal displays  
Optical filters  
Photoresists  
(coloring resin compns. for color filters and liquid-crystal displays)
- IT Anhydrides  
Carboxylic acids, uses  
(coloring resin compns. for color filters and liquid-crystal displays)
- IT Pigments, nonbiological  
(derivs., auxiliary colorant dispersants; coloring resin compns. for color filters and liquid-crystal displays)
- IT Polymers, uses  
(graft, nitrogen-containing, colorant dispersants; coloring resin

- compns. for color filters and liquid-crystal displays)
- IT Polyesters, reactions  
(monoalkyl ester, intermediate for colorant dispersants; coloring resin compns. for color filters and liquid-crystal displays)
- IT Polyurethanes, uses  
(polyester-polyoxyalkylene-, colorant dispersants; coloring resin compns. for color filters and liquid-crystal displays)
- IT 30125-47-4D, Pigment Yellow 138, sulfonate derivs.  
(auxiliary colorant dispersant; coloring resin compns. for color filters and liquid-crystal displays)
- IT 760968-92-1P 760968-94-3P 760968-95-4P  
760968-96-5P 760968-97-6P 760968-99-8P  
(binder; coloring resin compns. for color filters and liquid-crystal displays)
- IT 72145-60-9P, Benzyl methacrylate-methacrylic acid-methyl methacrylate copolymer  
(binder; coloring resin compns. for color filters and liquid-crystal displays)
- IT 91-08-7DP, 2,6-Tolylene diisocyanate, reaction products with polycaprolactone monoalkyl esters, polyoxyalkylenes, and diamines 109-55-7DP, N,N-Dimethyl-1,3-propanediamine, reaction products with polyisocyanates, polycaprolactone monoalkyl esters, and polyoxyalkylenes 25190-06-1DP, Polytetramethylene glycol, reaction products with polyisocyanates, polycaprolactone monoalkyl esters, and diamines 47809-75-6DP, reaction products with polycaprolactone monoalkyl esters, polyoxyalkylenes, and diamines 63700-60-7DP, reaction products with polycaprolactone monoalkyl esters, polyoxyalkylenes, and diamines 81157-48-4DP, reaction products with polyisocyanates, polyoxyalkylenes, and diamines 81208-91-5DP, reaction products with polyisocyanates, polyoxyalkylenes, and diamines 113007-78-6DP, reaction products with polyisocyanates, polyoxyalkylenes, and diamines 139465-65-9DP, Mitec GP 750A, reaction products with polycaprolactone monoalkyl esters, polyoxyalkylenes, and diamines 164218-30-8P 247161-79-1DP, reaction products with polyisocyanates, polyoxyalkylenes, and diamines 760972-36-9P, Caprolactone-ethyleneimine graft copolymer stearate  
(colorant dispersant; coloring resin compns. for color filters and liquid-crystal displays)
- IT 147-14-8, C.I. Pigment Blue 15:6 4051-63-2, C.I. Pigment Red 177 14302-13-7, C.I. Pigment Green 36 30125-47-4, C.I. Pigment Yellow 138  
(colorant; coloring resin compns. for color filters and liquid-crystal displays)
- IT 61-82-5DP, 3-Amino-1,2,4-triazole, reaction products with polyisocyanates, polycaprolactone monoalkyl esters, and polyoxyalkylenes  
(coloring resin compns. for color filters and liquid-crystal displays)
- IT 108-30-5, Succinic anhydride, uses 108-31-6, Maleic anhydride, uses  
(coloring resin compns. for color filters and liquid-crystal displays)
- IT 154213-94-2, Disperbyk 161 460741-05-3, Disperbyk 2001 760972-27-8, Solsperse 34750  
(dispersant; coloring resin compns. for color filters and liquid-crystal displays)
- IT 492462-48-3P, Benzyl methacrylate-2-hydroxyethyl methacrylate-methacrylic acid-methyl methacrylate copolymer ester with

(3,4-epoxycyclohexyl)methyl acrylate 760972-30-3P, FA  
 513M-glycidyl methacrylate-styrene copolymer acrylate  
 tetrahydrophthalate triethylamine salt 760972-33-6P, Benzyl  
 methacrylate-FA 513M-glycidyl methacrylate-methyl methacrylate  
 copolymer acrylate tetrahydrophthalate triethylamine salt  
 760972-34-7P, Methacrylic acid-styrene copolymer ester with  
 (3,4-epoxycyclohexyl)methyl acrylate 760972-35-8P, Benzyl  
 methacrylate-methacrylic acid-methyl methacrylate copolymer ester with  
 (3,4-epoxycyclohexyl)methyl acrylate  
 (intermediate for binder; coloring resin compns. for color  
 filters and liquid-crystal displays)

IT 81157-48-4P, Polycaprolactone, sru, monoester with lauryl alcohol  
 81208-91-5P, Polycaprolactone monoester with lauryl alcohol  
 113007-78-6P, Polycaprolactone, sru, monoester with methyl alcohol  
 247161-79-1P, Polycaprolactone monoester with methyl alcohol  
 (intermediate for colorant dispersant; coloring resin compns. for  
 color filters and liquid-crystal displays)

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR  
 THIS RECORD. ALL CITATIONS AVAILABLE IN THE  
 RE FORMAT

L50 ANSWER 10 OF 35 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2004:758933 HCAPLUS Full-text

DOCUMENT NUMBER: 141:262190

TITLE: Curable compositions and formation of protective  
 films with low dielectric constant and excellent  
 surface smoothness and heat resistance from them

INVENTOR(S): Baba, Atsushi; Nishikawa, Michinori

PATENT ASSIGNEE(S): JSR Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 27 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2004256754	A	20040916	JP 2003-51267	20030227

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PRIORITY APPLN. INFO.: JP 2003-51267 20030227

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ED Entered STN: 17 Sep 2004

AB The compns., useful for color filters for LCD and CCD, contain copolymers (A)  
 of epoxy-containing unsatd. compds., unsatd. carboxylic acids (optional)  
 and/or their anhydrides, and other olefinic unsatd. compds., cationically  
 polymerizable compds. (B) other than A, and fullerenes (C) and/or their  
 derivs. Thus, adding 35 parts trimellitic anhydride to a composition  
 containing 2,4-diphenyl-4-methyl-1-pentene-glycidyl methacrylate-styrene  
 copolymer 100, Epikote 157S65 (bisphenol A novolak epoxy resin) 20.0, hydroxy-  
 containing fullerene [C<sub>60</sub>(OH)<sub>n</sub>; n = 20-30] 10.0, and γ-  
 glycidoxypropyltrimethoxysilane 15 parts, applying it on a glass substrate,  
 and heating it at 230° for 60 min gave a coating showing light transmittance  
 (400-800 nm) 99%, pencil hardness 5H, and good adhesion, thermal shrinkage  
 resistance, and surface smoothness.

IT 157015-57-1P 405297-65-6P,  
 Cyclohexylmaleimide-glycidyl methacrylate-methacrylic acid-styrene  
 copolymer

(heat- or radiation-curable compns. for dielec. protective coatings  
 for color filters with good surface smoothness,

10/579,066

transparency, and heat resistance)

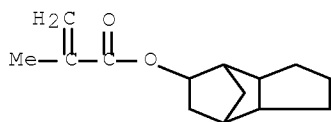
RN 157015-57-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with ethenylbenzene,  
octahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate and  
2-oxiranylmethyl 2-methyl-2-propenoate (CA INDEX NAME)

CM 1

CRN 34759-34-7

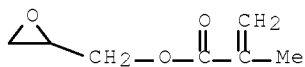
CMF C14 H20 O2



CM 2

CRN 106-91-2

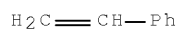
CMF C7 H10 O3



CM 3

CRN 100-42-5

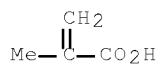
CMF C8 H8



CM 4

CRN 79-41-4

CMF C4 H6 O2

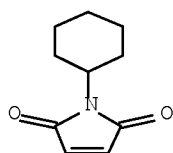


10/579,066

RN 405297-65-6 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, polymer with  
 1-cyclohexyl-1H-pyrrole-2,5-dione, ethenylbenzene and 2-oxiranylmethyl  
 2-methyl-2-propenoate (CA INDEX NAME)

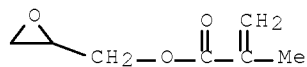
CM 1

CRN 1631-25-0  
 CMF C10 H13 N O2



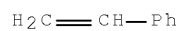
CM 2

CRN 106-91-2  
 CMF C7 H10 O3



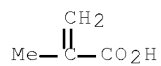
CM 3

CRN 100-42-5  
 CMF C8 H8



CM 4

CRN 79-41-4  
 CMF C4 H6 O2

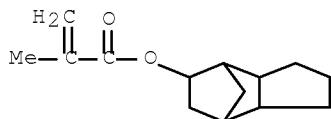


10/579,066

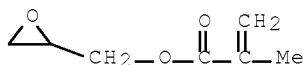
IT 600737-88-0P 600737-89-1P 600737-90-4P  
756479-35-3P 756479-36-4P  
(heat- or radiation-curable compns. for dielec. protective coatings  
for color filters with good surface smoothness,  
transparency, and heat resistance)  
RN 600737-88-0 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, polymer with Epikote 157S65,  
ethenylbenzene, octahydro-4,7-methano-1H-inden-5-yl  
2-methyl-2-propenoate and oxiranylmethyl 2-methyl-2-propenoate (9CI)  
(CA INDEX NAME)  
  
CM 1  
  
CRN 137598-82-4  
CMF Unspecified  
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

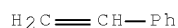
CM 2  
  
CRN 34759-34-7  
CMF C14 H20 O2



CM 3  
  
CRN 106-91-2  
CMF C7 H10 O3



CM 4  
  
CRN 100-42-5  
CMF C8 H8

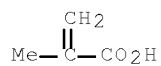




CM 5

CRN 79-41-4

CMF C4 H6 O2



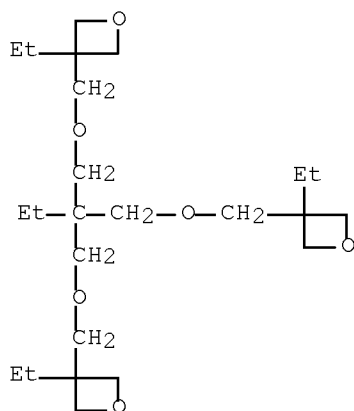
RN 600737-89-1 HCAPLUS

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 3,3'-[[2-ethyl-2-[[ (3-ethyl-3-oxetanyl)methoxy]methyl]-1,3-  
 propanediyl]bis(oxymethylene)]bis[3-ethyloxetane],  
 octahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate and  
 oxiranylmethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

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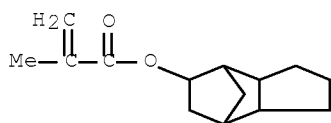
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CM 2

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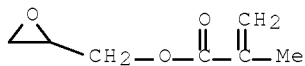
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10/579,066

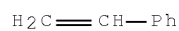
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CRN 106-91-2  
CMF C7 H10 O3



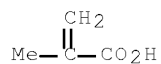
CM 4

CRN 100-42-5  
CMF C8 H8



CM 5

CRN 79-41-4  
CMF C4 H6 O2



RN 600737-90-4 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, polymer with  
1-cyclohexyl-1H-pyrrole-2,5-dione, Epikote 157S65, ethenylbenzene and  
oxiranylmethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

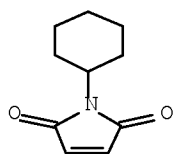
CRN 137598-82-4  
CMF Unspecified  
CCI PMS, MAN

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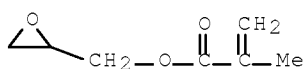
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10/579,066



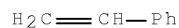
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CRN 106-91-2  
CMF C7 H10 O3



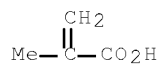
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CRN 100-42-5  
CMF C8 H8



CM 5

CRN 79-41-4  
CMF C4 H6 O2

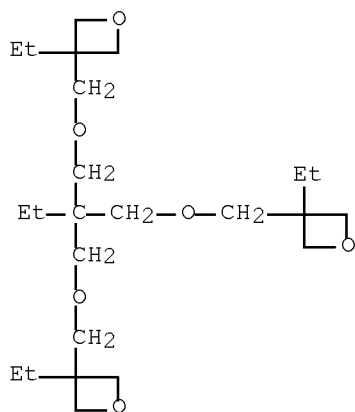


RN 756479-35-3 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, polymer with  
1-cyclohexyl-1H-pyrrole-2,5-dione, ethenylbenzene,  
3,3'-[[[2-ethyl-2-[[[3-ethyl-3-oxetanyl)methoxy]methyl]-1,3-  
propanediyl]bis(oxymethylene)]bis[3-ethyloxetane] and oxiranylmethyl  
2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 180423-87-4  
CMF C24 H44 O6

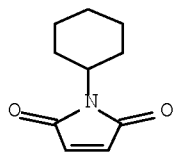
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CM 2

CRN 1631-25-0

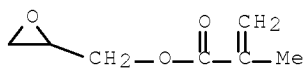
CMF C10 H13 N O2



CM 3

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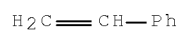
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CM 4

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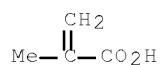
CMF C8 H8



CM 5

CRN 79-41-4

CMF C4 H6 O2



RN 756479-36-4 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with (chloromethyl)oxirane,  
 1-cyclohexyl-1H-pyrrole-2,5-dione, Epikote 157S65, ethenylbenzene,  
 4,4'-(1-methylethylidene)bis[phenol] and oxiranylmethyl  
 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 137598-82-4

CMF Unspecified

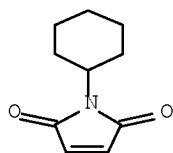
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 2

CRN 1631-25-0

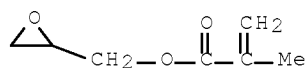
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CM 3

CRN 106-91-2

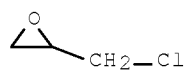
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CM 4

CRN 106-89-8

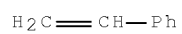
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CM 5

CRN 100-42-5

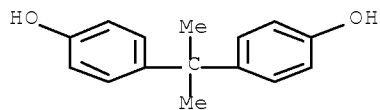
CMF C8 H8



CM 6

CRN 80-05-7

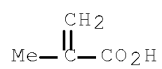
CMF C15 H16 O2



CM 7

CRN 79-41-4

CMF C4 H6 O2



IC ICM C08G059-20  
 ICS B05D007-24; C08K003-04; C08K005-00; C08L063-00; C09D123-00;  
 C09D163-00

- CC 42-10 (Coatings, Inks, and Related Products)  
Section cross-reference(s): 37, 73
- ST color filter protection film smooth surface;  
thermal curing dielec film heat resistance; radiation curing glycidyl  
methacrylate copolymer fullerene
- IT Polyoxyalkylenes, uses  
(amino- and methoxy-terminated, reaction products with fullerene  
60; heat- or radiation-curable compns. for dielec. protective  
coatings for color filters with good surface  
smoothness, transparency, and heat resistance)
- IT Transparent materials  
(coatings; heat- or radiation-curable compns. for dielec.  
protective coatings for color filters with good  
surface smoothness, transparency, and heat resistance)
- IT Epoxy resins, uses  
(cured; heat- or radiation-curable compns. for dielec. protective  
coatings for color filters with good surface  
smoothness, transparency, and heat resistance)
- IT Heat-resistant materials  
(dielec. coatings; heat- or radiation-curable compns. for dielec.  
protective coatings for color filters with good  
surface smoothness, transparency, and heat resistance)
- IT Leveling agents  
Optical filters  
(heat- or radiation-curable compns. for dielec. protective coatings  
for color filters with good surface smoothness,  
transparency, and heat resistance)
- IT Fullerenes  
(heat- or radiation-curable compns. for dielec. protective coatings  
for color filters with good surface smoothness,  
transparency, and heat resistance)
- IT Electric insulators  
(heat-resistant coatings; heat- or radiation-curable compns. for  
dielec. protective coatings for color filters  
with good surface smoothness, transparency, and heat resistance)
- IT Coating materials  
(radiation-curable; heat- or radiation-curable compns. for dielec.  
protective coatings for color filters with good  
surface smoothness, transparency, and heat resistance)
- IT Coating materials  
(transparent; heat- or radiation-curable compns. for dielec.  
protective coatings for color filters with good  
surface smoothness, transparency, and heat resistance)
- IT 141-82-2DP, Malonic acid, esters, reaction products with fullerene 60  
25322-68-3DP, Polyethylene glycol, amino- and methoxy-terminated,  
reaction products with fullerene 60 99685-96-8DP, Fullerene 60,  
hydroxy-, dicarboxymethyl-, or methoxypolyoxyethylene-containing  
756894-20-9DP, Sunbright MEPA 50H, reaction products with fullerene 60  
(heat- or radiation-curable compns. for dielec. protective coatings  
for color filters with good surface smoothness,  
transparency, and heat resistance)
- IT 157015-57-1P 405297-65-6P,  
Cyclohexylmaleimide-glycidyl methacrylate-methacrylic acid-styrene  
copolymer 756479-16-0P, 2,4-Diphenyl-4-methyl-1-pentene-glycidyl  
methacrylate-styrene copolymer 756479-19-3P,  
2,4-Diphenyl-4-methyl-1-pentene-glycidyl  
methacrylate-tricyclo[5.2.1.0<sup>2,6</sup>]decanyl methacrylate copolymer  
(heat- or radiation-curable compns. for dielec. protective coatings  
for color filters with good surface smoothness,  
transparency, and heat resistance)

10/579,066

IT 600737-88-0P 600737-89-1P 600737-90-4P  
 756479-26-2P 756479-28-4P 756479-30-8P,  
 2,4-Diphenyl-4-methyl-1-pentene-glycidyl  
 methacrylate-styrene-trimellitic anhydride copolymer 756479-32-0P  
 756479-34-2P 756479-35-3P 756479-36-4P  
 (heat- or radiation-curable compns. for dielec. protective coatings  
 for color filters with good surface smoothness,  
 transparency, and heat resistance)

L50 ANSWER 11 OF 35 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2004:534427 HCAPLUS Full-text

DOCUMENT NUMBER: 141:96795

TITLE: Color filter black matrix

resist composition and carbon black dispersion

composition used for the composition

INVENTOR(S): Kamata, Hirotooshi; Kamijo, Masanao; Onishi, Mina

PATENT ASSIGNEE(S): Showa Denko K. K., Japan

SOURCE: PCT Int. Appl., 69 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004055597	A1	20040701	WO 2003-JP16174	20031217
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JP 2004198717	A	20040715	JP 2002-366878	20021218
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CN 1729429	A	20060201	CN 2003-80106777	20031217
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US 20060041053	A1	20060223	US 2005-539283	20050616
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PRIORITY APPLN. INFO.:			JP 2002-366878	A 20021218
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			US 2002-435997P	P 20021226
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			WO 2003-JP16174	W 20031217
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ED Entered STN: 02 Jul 2004



AB The present invention provides a carbon black dispersion composition for a color filter black matrix resist composition, containing (A) a carbon black having specified phys. properties (average primary particle diameter, concentration of surface carboxyl groups), (B) a copolymer having an amino group and/or its quaternary ammonium salt, and (C) an organic solvent, and a color filter black matrix resist composition that contains the above-mentioned dispersion composition, (D) a binder resin having a carboxyl group, (E) an ethylenically unsatd. monomer, (F) a photopolymn. initiator, and (G) specified multifunctional thiol compound and can easily form a thin film or pattern having high light-shielding property by photolithog. method pattern, has excellent storage stability, and exhibits sufficient sensitivity and resolution

IT 30400-35-2P, Butyl Methacrylate-glycidyl methacrylate-methacrylic acid-methyl methacrylate copolymer (color filter black matrix resist composition and carbon black dispersion composition containing)

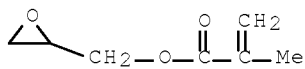
RN 30400-35-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with butyl 2-methyl-2-propenoate, methyl 2-methyl-2-propenoate and 2-oxiranylmethyl 2-methyl-2-propenoate (CA INDEX NAME)

CM 1

CRN 106-91-2

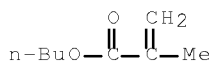
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CM 2

CRN 97-88-1

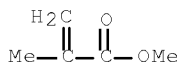
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CM 3

CRN 80-62-6

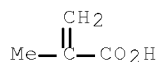
CMF C5 H8 O2



CM 4

CRN 79-41-4

CMF C4 H6 O2



- IC ICM G03F007-00  
ICS G03F001-1335
- CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 35, 38
- ST color filter black matrix resist compn carbon dispersion
- IT Carbon black, uses  
(Special Black 250; color filter black matrix resist composition and carbon black dispersion composition containing)
- IT Optical filters  
Photolithography  
(color filter black matrix resist composition and carbon black dispersion composition)
- IT Cameras  
Liquid crystal displays  
(color filter black matrix resist composition and carbon black dispersion composition for)
- IT 132011-04-2  
(binder; color filter black matrix resist composition and carbon black dispersion composition containing)
- IT 30400-35-2P, Butyl Methacrylate-glycidyl methacrylate-methacrylic acid-methyl methacrylate copolymer  
714956-12-4P, Benzyl methacrylate-2-hydroxyethyl methacrylate-methacrylic acid-methyl methacrylate-2-(methacryloyloxy)ethyl isocyanate copolymer  
714956-13-5P, Macromonomer AA 6-Light Ester DQ 100-Light Ester DM-NK Ester M 20G copolymer 714959-43-0P, Macromonomer AA 6-ethyl acrylate-Light Ester DQ 100-Light Ester DM copolymer 714959-44-1P, Macromonomer AA 6-Light Ester DQ 100-Light Ester DM-Light Ester PO copolymer  
(color filter black matrix resist composition and carbon black dispersion composition containing)
- IT 590678-22-1P 645402-18-2P  
(photopolymn. initiator; color filter black matrix resist composition and carbon black dispersion composition containing)
- IT 77-99-6, Trimethylolpropane 89-98-5, o-Chlorobenzaldehyde  
3457-48-5, 4,4'-Dimethylbenzil 54051-19-3, 3-Mercaptobutanoic acid  
(preparation of photopolymn. initiator for color filter black matrix resist composition)
- IT 645402-19-3P  
(preparation of photopolymn. initiator for color filter black matrix resist composition)
- IT 108-94-1, Cyclohexanone, uses

(solvent; ~~color filter~~ black matrix resist  
composition and carbon black dispersion composition containing)  
REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR  
THIS RECORD. ALL CITATIONS AVAILABLE IN THE  
RE FORMAT

L50 ANSWER 12 OF 35 HCAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 2004:534426 HCAPLUS Full-text  
DOCUMENT NUMBER: 141:96711  
TITLE: ~~Color filter~~ black matrix  
resist composition  
INVENTOR(S): Kamata, Hirotooshi; Kamijo, Masanao; Onishi, Mina  
PATENT ASSIGNEE(S): Showa Denko K. K., Japan  
SOURCE: PCT Int. Appl., 64 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 2004055596	A1	20040701	WO 2003-JP16017	20031215
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RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
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CN 1726434	A	20060125	CN 2003-80106299	20031215
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US 20060036023	A1	20060216	US 2005-539037	20050615
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PRIORITY APPLN. INFO.:			JP 2002-364274	A 20021216
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			US 2002-435284P	P 20021223
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			WO 2003-JP16017	W 20031215
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OTHER SOURCE(S): MARPAT 141:96711

ED Entered STN: 02 Jul 2004

AB The present invention relates to (1) a photosensitive composition for ~~color filter~~ black matrix resists, containing (A) a binder resin having a carboxyl group, (B) a compound having an ethylenically unsatd. bond, (C) a photopolymg. initiator, (D) a thiol compound having two or more ~~mercapto~~-group-containing

groups in which carbon atoms at the  $\alpha$ -position and/or  $\eta$ -position with respect to the mercapto group have a substituent, and (E) an organic solvent, and having high sensitivity and excellent storage stability; and (2) color filter black matrix resist containing (1) the photosensitive composition for color filter black matrix resists and a black pigment (F).

IT 30400-35-2P, Butyl methacrylate-glycidyl methacrylate-methacrylic acid-methyl methacrylate copolymer (color filter black matrix resist composition containing)

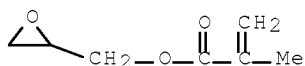
RN 30400-35-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with butyl 2-methyl-2-propenoate, methyl 2-methyl-2-propenoate and 2-oxiranylmethyl 2-methyl-2-propenoate (CA INDEX NAME)

CM 1

CRN 106-91-2

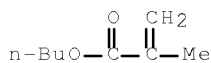
CMF C7 H10 O3



CM 2

CRN 97-88-1

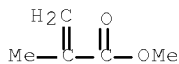
CMF C8 H14 O2



CM 3

CRN 80-62-6

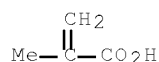
CMF C5 H8 O2



CM 4

CRN 79-41-4

CMF C4 H6 O2



IC ICM G03F007-00  
ICS G02F001-1335

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 35, 38

ST printing plate ~~color filter~~ black matrix resist compn

IT Carbon black, uses  
(Raven 1080; ~~color filter~~ black matrix resist composition containing)

IT Light-sensitive materials  
Optical filters  
Resists  
(~~color filter~~ black matrix resist composition)

IT Printing plates  
(~~color filter~~ black matrix resist composition for)

IT Polymerization  
(photopolymn.; ~~color filter~~ black matrix resist composition)

IT 30400-35-2P, Butyl methacrylate-glycidyl methacrylate-methacrylic acid-methyl methacrylate copolymer  
714956-12-4P, Benzyl methacrylate-2-hydroxyethyl methacrylate-methacrylic acid-methyl methacrylate-2-(methacryloyloxy)ethyl isocyanate copolymer  
714956-13-5P, Macromonomer AA 6-NK Ester M 20G-Light Ester DQ 100-Light Ester DM copolymer  
(~~color filter~~ black matrix resist composition containing)

IT 149-30-4, 2-Mercaptobenzothiazole 33007-83-9, Trimethylolpropane tris(3-mercaptopropionate)  
(~~color filter~~ black matrix resist composition containing)

IT 590678-00-5P 590678-06-1P 590678-22-1P 645402-18-2P  
(photopolymg. initiator; ~~color filter~~ black matrix resist composition containing)

IT 57-55-6, 1,2-Propylene glycol, reactions 77-99-6, Trimethylolpropane 89-98-5, o-Chlorobenzaldehyde 3457-48-5, 4,4'-Dimethylbenzil 4695-31-2, 2-Mercaptoisobutanoic acid 54051-19-3, 3-Mercaptobutanoic acid  
(preparation of photopolymg. initiator for ~~color filter~~ black matrix resist composition)

IT 645402-19-3P  
(preparation of photopolymg. initiator for ~~color filter~~ black matrix resist composition)

IT 108-94-1, Cyclohexanone, uses  
(solvent; ~~color filter~~ black matrix resist composition containing)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

DOCUMENT NUMBER: 141:79433  
 TITLE: Photo- and heat-curable polymer compositions, their use as color filters, and liquid crystal displays  
 INVENTOR(S): Kaneko, Tomomasa; Ueda, Kenichi  
 PATENT ASSIGNEE(S): Nippon Shokubai Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 19 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
JP 2004177498	A	20040624	JP 2002-341066	20021125
			<--	
PRIORITY APPLN. INFO.:			JP 2002-341066	20021125
			<--	

ED Entered STN: 25 Jun 2004

AB The compns. comprise (A) binder resins containing carboxyl groups and/or ester groups, (B) radically polymerizable monomers, (C) photopolymn. initiators, (D) esterification catalysts and/or ester exchanger catalysts, and (X) compds. having  $\geq 2$  OH groups or having  $\geq 1$  OH group(s) and  $\geq 1$  radically polymerizable double bond(s). Color filters made of the compns. and liquid crystal displays comprising the color filters are also claimed. The color filters prepared from the compns. have high hardness and heat resistance.

IT 709632-22-4P

(heat- and photocurable polymer compns. for color filters in liquid crystal displays)

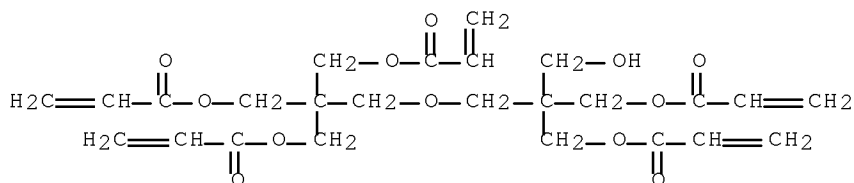
RN 709632-22-4 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with methyl 2-methyl-2-propenoate and 1-phenyl-1H-pyrrole-2,5-dione, 2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl ester, polymer with 2-[[3-hydroxy-2,2-bis[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 60506-81-2

CMF C25 H32 O12



CM 2

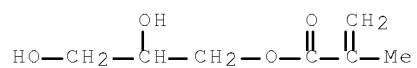
CRN 557787-06-1

CMF (C10 H7 N O2 . C5 H8 O2 . C4 H6 O2)x . x C7 H12 O4

CM 3

CRN 5919-74-4

CMF C7 H12 O4



CM 4

CRN 108602-53-5

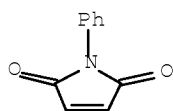
CMF (C10 H7 N O2 . C5 H8 O2 . C4 H6 O2) x

CCI PMS

CM 5

CRN 941-69-5

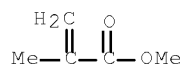
CMF C10 H7 N O2



CM 6

CRN 80-62-6

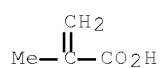
CMF C5 H8 O2



CM 7

CRN 79-41-4

CMF C4 H6 O2



IC ICM G03F007-004  
 ICS C08F290-00; G02B005-20; G02F001-1333; G02F001-1335; G02F001-1339;  
 G03F007-027; G03F007-033

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other  
 Reprographic Processes)  
 Section cross-reference(s): 38

ST photocurable heat curable polymer compn  
 color filter; color filter LCD  
 acrylic light heat curable polymer

IT Liquid crystal displays  
 Optical filters  
 (heat- and photocurable polymer compns. for color  
 filters in liquid crystal displays)

IT Photoimaging materials  
 (photo- and heat-curable; heat- and photocurable polymer compns.  
 for color filters in liquid crystal displays)

IT 13963-57-0, Aluminum tris(acetylacetonate)  
 (ester exchange catalyst; heat- and photocurable polymer  
 compns. for color filters in liquid crystal  
 displays)

IT 709631-64-1P, Dipentaerythritol pentaacrylate-methacrylic acid-methyl  
 methacrylate-trimethylolpropane copolymer 709631-65-2P, Cyclohexyl  
 methacrylate-dipentaerythritol pentaacrylate-2-ethylhexyl  
 methacrylate-methacrylic acid-methyl methacrylate copolymer  
 709632-22-4P  
 (heat- and photocurable polymer compns. for color  
 filters in liquid crystal displays)

IT 90-93-7, 4,4'-Bis(diethylamino)benzophenone 1707-68-2,  
 2,2'-Bis(2-chlorophenyl)-4,4',5,5'-tetraphenylbiimidazole  
 (photopolymer. initiator; heat- and photocurable polymer compns. for  
 color filters in liquid crystal displays)

L50 ANSWER 14 OF 35 HCAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2004:412057 HCAPLUS Full-text  
 DOCUMENT NUMBER: 140:383249  
 TITLE: Photoimaging resin color pastes with decreased ion  
 impurities, and color filters  
 manufactured from them  
 INVENTOR(S): Nishiyama, Masahito; Kubota, Yasuo; Eguchi,  
 Masuichi  
 PATENT ASSIGNEE(S): Toray Industries, Inc., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
JP 2004144976	A	20040520	JP 2002-309430	20021024
			<--	
PRIORITY APPLN. INFO.:			JP 2002-309430	20021024
			<--	

ED Entered STN: 21 May 2004

AB The invention relates to pastes with halogen ion content (extracted from the  
 pastes by H<sub>2</sub>O) ≤50 ppm containing colorants and acrylic polymers having  
 unsatd. groups in the side chains, wherein the unsatd. groups are introduced  
 to the polymers by reactions in the presence of tertiary amine catalysts.



10/579,066

IT 152324-69-1P, Methacrylic acid-methyl methacrylate-styrene  
copolymer, ester with glycidyl methacrylate  
(photoimaging paste containing; acrylic photoimaging color pastes with  
decreased ion impurities for color filters)

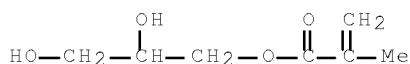
RN 152324-69-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with ethenylbenzene and methyl  
2-methyl-2-propenoate, 2-hydroxy-3-[(2-methyl-1-oxo-2-propen-1-  
yl)oxy]propyl ester (CA INDEX NAME)

CM 1

CRN 5919-74-4

CMF C7 H12 O4



CM 2

CRN 25035-81-8

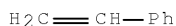
CMF (C8 H8 . C5 H8 O2 . C4 H6 O2)x

CCI PMS

CM 3

CRN 100-42-5

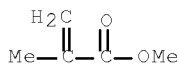
CMF C8 H8



CM 4

CRN 80-62-6

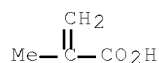
CMF C5 H8 O2



CM 5

CRN 79-41-4

CMF C4 H6 O2



- IC ICM G02B005-20  
ICS C08F008-14; G02B005-22; G02F001-1335; G03F007-004; G03F007-038
- CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 38
- ST photoimaging acrylic paste color filter halogen free; tertiary amine catalyst unsatd acrylic paste photoimaging; benzyldimethylamine esterification catalyst acrylic photoimaging color
- IT Optical filters  
(acrylic photoimaging color pastes with decreased ion impurities for color filters)
- IT Photoimaging materials  
(color; acrylic photoimaging color pastes with decreased ion impurities for color filters)
- IT Esterification catalysts  
(tertiary amine; acrylic photoimaging color pastes with decreased ion impurities for color filters)
- IT Amines, uses  
(tertiary, esterification catalyst; acrylic photoimaging color pastes with decreased ion impurities for color filters)
- IT 106-91-2, Glycidyl methacrylate  
(acrylic photoimaging color pastes with decreased ion impurities for color filters)
- IT 147-14-8, Pigment Blue 15:6 14302-13-7, Pigment Green 36 30125-47-4, Pigment Yellow 138 84632-65-5, Pigment Red 254  
(colorant, photoimaging paste containing; acrylic photoimaging color pastes with decreased ion impurities for color filters)
- IT 103-83-3, Dimethylbenzylamine 121-44-8, Triethylamine, uses  
(esterification catalyst; acrylic photoimaging color pastes with decreased ion impurities for color filters)
- IT 152324-69-1P, Methacrylic acid-methyl methacrylate-styrene copolymer, ester with glycidyl methacrylate  
(photoimaging paste containing; acrylic photoimaging color pastes with decreased ion impurities for color filters)
- IT 29570-58-9, DPHA  
(photoimaging paste containing; acrylic photoimaging color pastes with decreased ion impurities for color filters)

L50 ANSWER 15 OF 35 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2004:179977 HCAPLUS Full-text

DOCUMENT NUMBER: 140:225904

TITLE: Stable pigment dispersions, color filters and their compositions therewith, and liquid crystal panels therewith

INVENTOR(S): Kubota, Yasuo; Kitazawa, Daisuke; Nomura, Shuji; Nagase, Akira; Eguchi, Masuichi

PATENT ASSIGNEE(S): Toray Industries, Inc., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 29 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004067715	A	20040304	JP 2002-224535	20020801
			<--	
PRIORITY APPLN. INFO.:			JP 2002-224535	20020801
			<--	

OTHER SOURCE(S): MARPAT 140:225904

ED Entered STN: 05 Mar 2004

AB The dispersions contain C.I. Pigment Yellow 138, quinophthalone derivs. having polar groups, and macromol. dispersants having basic groups in structure. The quinophthalone derivs. may be represented by Q(XYZ)<sub>n</sub> [Q = quinophthalone residue; n = 1-4; X = amido, ether, sulfido, sulfoxido, sulfone; Y = aryl, amino, sulfonato, (CH<sub>2</sub>)<sub>m</sub>NR<sub>1</sub>R<sub>2</sub> (R<sub>1</sub>, R<sub>2</sub> = H, alkyl, aryl; m = 1-6)].

IT 661471-68-7P  
 (color filter segments; stable yellow pigment dispersions containing polar-group-containing quinophthalones for color filters)

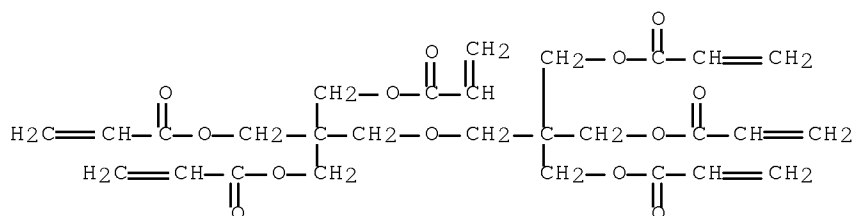
RN 661471-68-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with ethenylbenzene and methyl 2-methyl-2-propenoate, 2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl ester, polymer with 2-[[3-[(1-oxo-2-propenyl)oxy]-2,2-bis[[[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 29570-58-9

CMF C28 H34 O13



CM 2

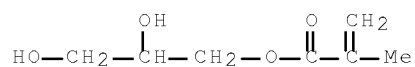
CRN 152324-69-1

CMF (C8 H8 . C5 H8 O2 . C4 H6 O2)x . x C7 H12 O4

CM 3

CRN 5919-74-4

CMF C7 H12 O4



CM 4

CRN 25035-81-8

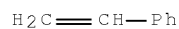
CMF (C8 H8 . C5 H8 O2 . C4 H6 O2)x

CCI PMS

CM 5

CRN 100-42-5

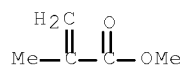
CMF C8 H8



CM 6

CRN 80-62-6

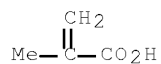
CMF C5 H8 O2



CM 7

CRN 79-41-4

CMF C4 H6 O2



IC ICM C09B067-46

ICS C09B025-00; C09B067-20; G02B005-20; G02B005-22; G02F001-1335

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38, 41, 73

ST LCD color filter pigment dispersion stability;  
 sulfonated quinophthalone pigment dispersant display filter;  
 allylamine polyester dispersant yellow pigment color  
 filter

- IT Liquid crystal displays  
(color; stable yellow pigment dispersions containing polar-group-containing quinophthalones for color filters)
- IT Photoimaging materials  
(photopolymerizable; stable yellow pigment dispersions containing polar-group-containing quinophthalones for color filters)
- IT Polyamines  
(polyalkylene-, dispersants; stable yellow pigment dispersions containing polar-group-containing quinophthalones for color filters)
- IT Polyesters, preparation  
(polyamine-, dispersants; stable yellow pigment dispersions containing polar-group-containing quinophthalones for color filters)
- IT Polyamines  
(polyester-, dispersants; stable yellow pigment dispersions containing polar-group-containing quinophthalones for color filters)
- IT Dispersing agents  
Optical filters  
(stable yellow pigment dispersions containing polar-group-containing quinophthalones for color filters)
- IT 30125-47-4, Pigment Yellow 138  
(Paliotol Yellow D 0960; stable yellow pigment dispersions containing polar-group-containing quinophthalones for color filters)
- IT 661471-68-7P  
(color filter segments; stable yellow pigment dispersions containing polar-group-containing quinophthalones for color filters)
- IT 438545-92-7P  
(dispersants; stable yellow pigment dispersions containing polar-group-containing quinophthalones for color filters)
- IT 9002-98-6DP, Epomin SP 018, reaction products with caprolactone-hydroxystearic acid copolymer 30551-89-4DP, PAA 1LV, reaction products with caprolactone-hydroxystearic acid copolymer 103467-59-0DP,  $\epsilon$ -Caprolactone-12-hydroxystearic acid copolymer, reaction products with polyallyl amines 386254-45-1P 414860-81-4P 414860-89-2P 664330-48-7P  
(dispersants; stable yellow pigment dispersions containing polar-group-containing quinophthalones for color filters)
- IT 219920-08-8, Solsperser 24000SC 358377-01-2, Ajisper PB 821  
(dispersants; stable yellow pigment dispersions containing polar-group-containing quinophthalones for color filters)
- IT 8014-95-7, Fuming sulfuric acid  
(dispersants; stable yellow pigment dispersions containing polar-group-containing quinophthalones for color filters)
- IT 91-63-4, Quinaldine 1823-59-2, 4,4'-Oxydiphthalic dianhydride 2420-87-3, 3,3',4,4'-Biphenyltetracarboxylic dianhydride 30734-81-7  
(stable yellow pigment dispersions containing polar-group-containing quinophthalones for color filters)

10/579,066

TITLE: Stable pigment dispersions, their compositions,  
color filters therefrom, and  
liquid crystal panels therewith  
INVENTOR(S): Kubota, Yasuo; Kitazawa, Daisuke; Nagase, Akira;  
Eguchi, Masuichi  
PATENT ASSIGNEE(S): Toray Industries, Inc., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 21 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004067714	A	20040304	JP 2002-224534	20020801
			<--	
PRIORITY APPLN. INFO.:			JP 2002-224534	20020801
			<--	

OTHER SOURCE(S): MARPAT 140:225903

ED Entered STN: 05 Mar 2004

AB The dispersions comprise pigments, P(NHCOXY)<sub>n</sub> [P = pigment residue; X = aryl; n = 1-4; Y = carboxyl, ester, OH, mercapto, amino, sulfonato, (CH<sub>2</sub>)<sub>m</sub>NR<sub>1</sub>R<sub>2</sub> (R<sub>1</sub>, R<sub>2</sub> = H, alkyl, aryl; m = 1-6)], and basic group-containing macromol. dispersants. Photopolymerizable compns. containing the dispersions, color filters therefrom, and LCD equipped therewith, are sep. claimed.

IT 661471-68-7P  
(color filter segments; stable pigment dispersions containing basic macromol. dispersants and pigment-bound amides for LCD color filters)

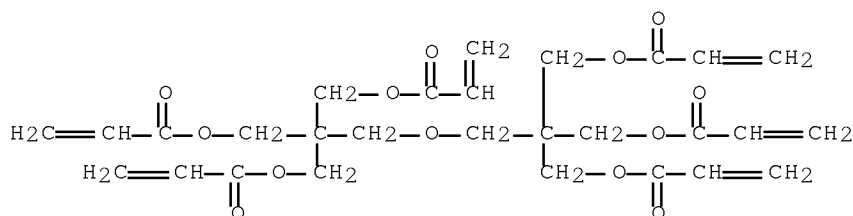
RN 661471-68-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with ethenylbenzene and methyl 2-methyl-2-propenoate, 2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl ester, polymer with 2-[[3-[(1-oxo-2-propenyl)oxy]-2,2-bis[[[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 29570-58-9

CMF C28 H34 O13



CM 2

CRN 152324-69-1

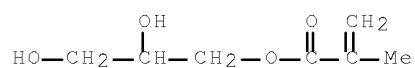
10/579,066

CMF (C8 H8 . C5 H8 O2 . C4 H6 O2)x . x C7 H12 O4

CM 3

CRN 5919-74-4

CMF C7 H12 O4



CM 4

CRN 25035-81-8

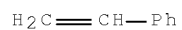
CMF (C8 H8 . C5 H8 O2 . C4 H6 O2)x

CCI PMS

CM 5

CRN 100-42-5

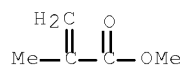
CMF C8 H8



CM 6

CRN 80-62-6

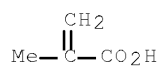
CMF C5 H8 O2



CM 7

CRN 79-41-4

CMF C4 H6 O2



IC ICM C09B067-46

- ICS B01F017-22; C09B067-20; C09D017-00; G02B005-20; G02B005-22
- CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 38, 41, 73
- ST LCD color filter pigment dispersion stability;  
polyallylamine caprolactone color filter pigment  
dispersant; pigment bound amide dispersant color  
filter compn
- IT Liquid crystal displays  
(color; stable pigment dispersions containing basic macromol.  
dispersants and pigment-bound amides for LCD color  
filters)
- IT Polyesters, preparation  
(polyamine-, dispersants; stable pigment dispersions containing basic  
macromol. dispersants and pigment-bound amides for LCD  
color filters)
- IT Polyamines  
(polyester-, dispersants; stable pigment dispersions containing basic  
macromol. dispersants and pigment-bound amides for LCD  
color filters)
- IT Dispersing agents  
Optical filters  
(stable pigment dispersions containing basic macromol. dispersants and  
pigment-bound amides for LCD color filters)
- IT 661471-68-7P  
(color filter segments; stable pigment  
dispersions containing basic macromol. dispersants and pigment-bound  
amides for LCD color filters)
- IT 9002-98-6DP, Epomin SP 018, reaction products with  
caprolactone-hydroxystearic acid copolymer 30551-89-4DP, PAA 1LV,  
reaction products with caprolactone-hydroxystearic acid copolymer  
103467-59-0DP,  $\epsilon$ -Caprolactone-12-hydroxystearic acid  
copolymer, reaction products with polyallylamine 415709-72-7P  
415709-74-9P  
(dispersants; stable pigment dispersions containing basic macromol.  
dispersants and pigment-bound amides for LCD color  
filters)
- IT 358377-01-2, Ajisper PB 821  
(dispersants; stable pigment dispersions containing basic macromol.  
dispersants and pigment-bound amides for LCD color  
filters)
- IT 219920-08-8, Solsperse 24000SC  
(dispersing agents; stable pigment dispersions containing basic  
macromol. dispersants and pigment-bound amides for LCD  
color filters)
- IT 84632-65-5, C.I. Pigment Red 254  
(stable pigment dispersions containing basic macromol. dispersants and  
pigment-bound amides for LCD color filters)
- IT 4051-63-2, C.I. Pigment Red 177 415709-73-8,  
1,4-Diketo-3,6-di(p-aminophenyl)pyrrolo[3,4-c]pyrrole  
(stable pigment dispersions containing basic macromol. dispersants and  
pigment-bound amides for LCD color filters)

L50 ANSWER 17 OF 35 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2003:735168 HCAPLUS Full-text

DOCUMENT NUMBER: 139:262286

TITLE: Compositions for color filter  
protective coatings and protective coatings with  
good flatness and ink-jet coatability

INVENTOR(S): Baba, Atsushi; Takatori, Masashige; Tanba, Kazuaki



PATENT ASSIGNEE(S): JSR Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2003262716	A	20030919	JP 2002-65978	20020311

&lt;--

PRIORITY APPLN. INFO.:	JP 2002-65978	20020311
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ED Entered STN: 19 Sep 2003

AB Title compns. comprise (A) copolymers comprising unsatd. carboxylic acids and/or unsatd. carboxylic anhydrides, epoxy-containing unsatd. compds., and olefin type unsatd. compds., (B) cationically polymerizable compds. excepting A, and (C) solvents with b.p.  $\geq 180^\circ$  under normal pressure. Thus, styrene 25, methacrylic acid 20, glycidyl methacrylate 45, and tricyclo[5.2.1.0<sup>2,6</sup>]decan-8-yl methacrylate 10 parts were polymerized to give a copolymer with Mw 6000, 100 parts of which was mixed with Epikote 157S65 10, diethylene glycol monobutyl ether acetate 800,  $\gamma$ -glycidoxypyrpyltrimethoxysilane 15, and SH 28PA surfactant 0.1 parts to give a transparent coating composition, which was applied on a deep glass using an ink-jet device, prebaked at  $80^\circ$  for 5 min, and heated at  $230^\circ$  for 60 min to give a 2.0  $\mu\text{m}$ -thick protective coating with good ink-jet coatability, heat resistance, adhesion, and flatness, and pencil hardness 5H.

IT 405297-68-9P 600737-88-0P 600737-89-1P

600737-90-4P 600737-91-5P

(compns. for color filter protective coatings  
 with good flatness)

RN 405297-68-9 HCAPLUS

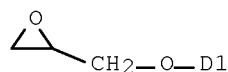
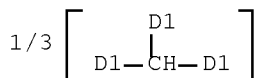
CN 2-Propenoic acid, 2-methyl-, polymer with  
 1-cyclohexyl-1H-pyrrole-2,5-dione, ethenylbenzene,  
 2,2',2''-[methylidynetris(phenyleneoxymethylene)]tris[oxirane] and  
 oxiranylmethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 66072-38-6

CMF C28 H28 O6

CCI IDS

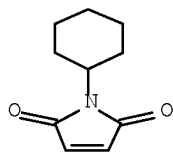


10/579,066

CM 2

CRN 1631-25-0

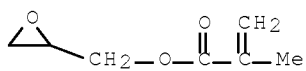
CMF C10 H13 N O2



CM 3

CRN 106-91-2

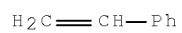
CMF C7 H10 O3



CM 4

CRN 100-42-5

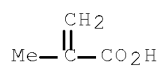
CMF C8 H8



CM 5

CRN 79-41-4

CMF C4 H6 O2



RN 600737-88-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with Epikote 157S65,  
ethenylbenzene, octahydro-4,7-methano-1H-inden-5-yl

10/579,066

2-methyl-2-propenoate and oxiranylmethyl 2-methyl-2-propenoate (9CI)  
(CA INDEX NAME)

CM 1

CRN 137598-82-4

CMF Unspecified

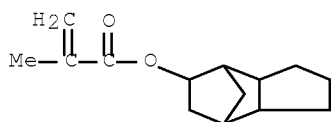
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 2

CRN 34759-34-7

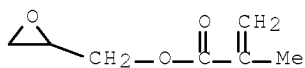
CMF C14 H20 O2



CM 3

CRN 106-91-2

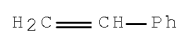
CMF C7 H10 O3



CM 4

CRN 100-42-5

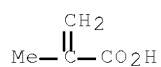
CMF C8 H8



CM 5

CRN 79-41-4

CMF C4 H6 O2



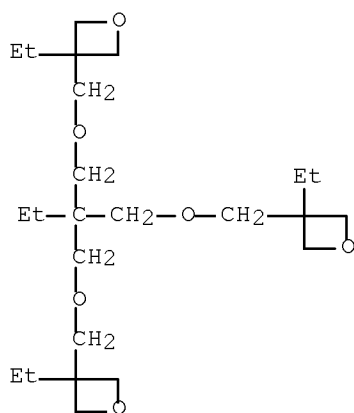
RN 600737-89-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with ethenylbenzene,  
3,3'-[[2-ethyl-2-[[[(3-ethyl-3-oxetanyl)methoxy]methyl]-1,3-  
propanediyl]bis(oxymethylene)]bis[3-ethyloxetane],  
octahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate and  
oxiranylmethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 180423-87-4

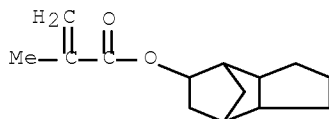
CMF C24 H44 O6



CM 2

CRN 34759-34-7

CMF C14 H20 O2

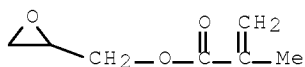


CM 3

CRN 106-91-2

CMF C7 H10 O3

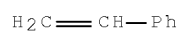
10/579,066



CM 4

CRN 100-42-5

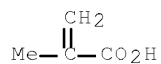
CMF C8 H8



CM 5

CRN 79-41-4

CMF C4 H6 O2



RN 600737-90-4 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with  
1-cyclohexyl-1H-pyrrole-2,5-dione, Epikote 157S65, ethenylbenzene and  
oxiranylmethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 137598-82-4

CMF Unspecified

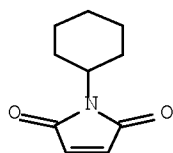
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 2

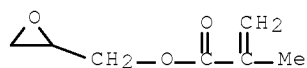
CRN 1631-25-0

CMF C10 H13 N O2



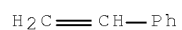
CM 3

CRN 106-91-2  
CMF C7 H10 O3



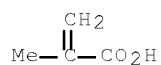
CM 4

CRN 100-42-5  
CMF C8 H8



CM 5

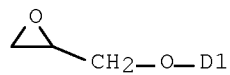
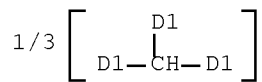
CRN 79-41-4  
CMF C4 H6 O2



RN 600737-91-5 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, polymer with ethenylbenzene,  
2,2',2''-[methylidynetris(phenyleneoxymethylene)]tris[oxirane],  
octahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate and  
oxiranylmethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

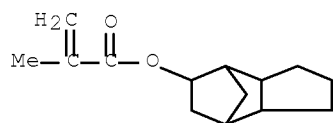
CM 1

CRN 66072-38-6  
CMF C28 H28 O6  
CCI IDS



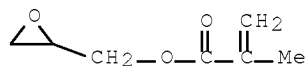
CM 2

CRN 34759-34-7  
CMF C14 H20 O2



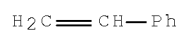
CM 3

CRN 106-91-2  
CMF C7 H10 O3



CM 4

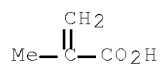
CRN 100-42-5  
CMF C8 H8



CM 5

10/579,066

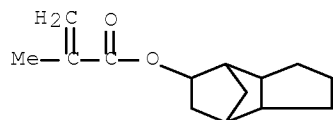
CRN 79-41-4  
CMF C4 H6 O2



IT 157015-57-1P, Glycidyl methacrylate-methacrylic acid-styrene-tricyclo[5.2.1.0<sup>2,6</sup>]decan-8-yl methacrylate copolymer  
405297-65-6P, N-Cyclohexyl maleimide-glycidyl methacrylate-methacrylic acid-styrene copolymer  
(intermediate; compns. for color filter protective coatings with good flatness)  
RN 157015-57-1 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, polymer with ethenylbenzene, octahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate and 2-oxiranylmethyl 2-methyl-2-propenoate (CA INDEX NAME)

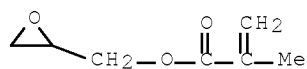
CM 1

CRN 34759-34-7  
CMF C14 H20 O2



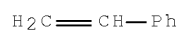
CM 2

CRN 106-91-2  
CMF C7 H10 O3



CM 3

CRN 100-42-5  
CMF C8 H8

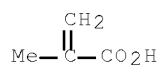




CM 4

CRN 79-41-4

CMF C4 H6 O2



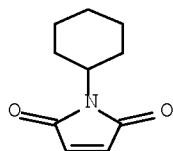
RN 405297-65-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with  
1-cyclohexyl-1H-pyrrole-2,5-dione, ethenylbenzene and 2-oxiranylmethyl  
2-methyl-2-propenoate (CA INDEX NAME)

CM 1

CRN 1631-25-0

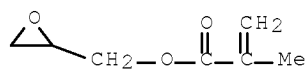
CMF C10 H13 N O2



CM 2

CRN 106-91-2

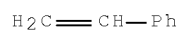
CMF C7 H10 O3



CM 3

CRN 100-42-5

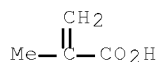
CMF C8 H8



CM 4

CRN 79-41-4

CMF C4 H6 O2



IC ICM G02B005-20  
ICS C08J005-18; C08L033-14; C08L063-00

CC 42-10 (Coatings, Inks, and Related Products)  
Section cross-reference(s): 73, 74

ST compn color filter protective coating flatness ink  
jet coatability; styrene methacrylic acid tricyclodecanyl methacrylate  
methacrylate glycidyl methacrylate copolymer; Epikote carboxy contg  
copolymer coating compn

IT Epoxy resins, uses  
(acrylic; compns. for color filter protective  
coatings with good flatness)

IT Coating materials  
Optical filters  
(compns. for color filter protective coatings  
with good flatness)

IT Polymerization catalysts  
(ring-opening; compns. for color filter  
protective coatings with good flatness)

IT 405297-68-9P 600737-88-0P 600737-89-1P  
600737-90-4P 600737-91-5P  
(compns. for color filter protective coatings  
with good flatness)

IT 157015-57-1P, Glycidyl methacrylate-methacrylic  
acid-styrene-tricyclo[5.2.1.0<sup>2,6</sup>]decan-8-yl methacrylate copolymer  
405297-65-6P, N-Cyclohexyl maleimide-glycidyl  
methacrylate-methacrylic acid-styrene copolymer  
(intermediate; compns. for color filter  
protective coatings with good flatness)

IT 66003-78-9, Triphenylsulfonium trifluoromethanesulfonate 138399-10-7  
(polymerization catalyst; compns. for color  
filter protective coatings with good flatness)

L50 ANSWER 18 OF 35 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2003:653451 HCAPLUS Full-text

DOCUMENT NUMBER: 139:188421

TITLE: Photopolymerizable compositions having good  
developability and solubility and their  
color filters

INVENTOR(S): Tanigawa, Keiko

PATENT ASSIGNEE(S): Mitsubishi Chemical Corp., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.  
CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003233179	A	20030822	JP 2002-31338	20020207
JP 4019726	B2	20071212	<--	
PRIORITY APPLN. INFO.:			JP 2002-31338	20020207
			<--	

ED Entered STN: 22 Aug 2003

AB The compns. contain (A) photopolymn. initiators, (B) binder resins bearing structures prepared by addition of carboxylic acid sites of carboxylic acid-containing resins with epoxy sites of compds. bearing ethylenically unsatd. groups and epoxy groups represented by EpCH2OR1O2CCR2:CH2 (Ep = epoxy, R1 = divalent linkage; R2 = H, Me), preferably, 4-hydroxybutyl acrylate glycidyl ether, and optionally (C) photopolymn. initiators and (D) colorants. Even when colorant concentration is high, the compns. have good developability, high adhesion strength to substrates or light-shielding layers, and good surface lubricity.

IT ~~581070-18-0P~~, Acrylic acid- $\alpha$ -methylstyrene-styrene copolymer ester with 4-hydroxybutyl acrylate glycidyl ether  
~~581070-19-1P~~  
 (binder; high colorant concentration photopolymerizable compns. having good developability and solubility for color filters  
 )

RN 581070-18-0 HCAPLUS

CN 2-Propenoic acid, polymer with ethenylbenzene and (1-methylethenyl)benzene, 2-hydroxy-3-[4-[(1-oxo-2-propenyl)oxy]butoxy]propyl ester (9CI) (CA INDEX NAME)

CM 1

CRN 251298-12-1

CMF C10 H18 O5



CM 2

CRN 52831-04-6

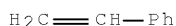
CMF (C9 H10 . C8 H8 . C3 H4 O2)x

CCI PMS

CM 3

CRN 100-42-5

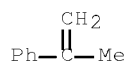
CMF C8 H8



CM 4

CRN 98-83-9

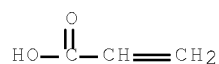
CMF C9 H10



CM 5

CRN 79-10-7

CMF C3 H4 O2



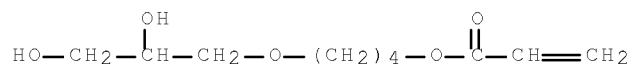
RN 581070-19-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with 2-hydroxyethyl  
 2-methyl-2-propenoate, methyl 2-methyl-2-propenoate and phenylmethyl  
 2-methyl-2-propenoate, 2-hydroxy-3-[4-[(1-oxo-2-  
 propenyl)oxy]butoxy]propyl ester (9CI) (CA INDEX NAME)

CM 1

CRN 251298-12-1

CMF C10 H18 O5



CM 2

CRN 191545-17-2

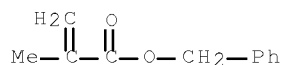
CMF (C11 H12 O2 . C6 H10 O3 . C5 H8 O2 . C4 H6 O2) x

CCI PMS

CM 3

CRN 2495-37-6

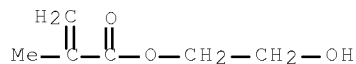
CMF C11 H12 O2



CM 4

CRN 868-77-9

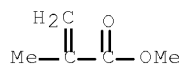
CMF C6 H10 O3



CM 5

CRN 80-62-6

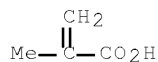
CMF C5 H8 O2



CM 6

CRN 79-41-4

CMF C4 H6 O2



IT 581070-20-4P, Acrylic acid- $\alpha$ -methylstyrene-styrene copolymer ester with 4-hydroxybutyl acrylate glycidyl ether, polymer with dipentaerythritol hexaacrylate 581070-21-5P, Benzyl methacrylate-2-hydroxyethyl methacrylate-methacrylic acid-methyl methacrylate copolymer ester with 4-hydroxybutyl acrylate glycidyl ether, polymer with dipentaerythritol hexaacrylate (crosslinked; high colorant concentration photopolymerizable compns. having good developability and solubility for color filters)

RN 581070-20-4 HCAPLUS

CN 2-Propenoic acid, polymer with ethenylbenzene and (1-methylethenyl)benzene, 2-hydroxy-3-[4-[(1-oxo-2-propenyl)oxy]butoxy]propyl ester, polymer with 2-[[3-[(1-oxo-2-propenyl)oxy]-2,2-bis[[[(1-oxo-2-

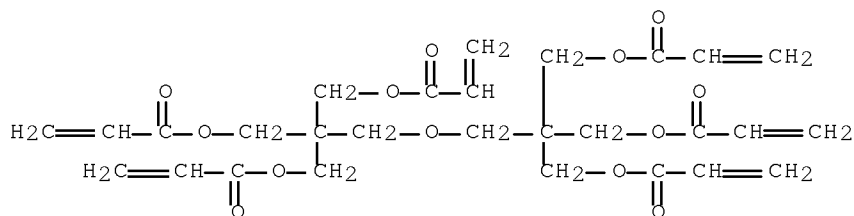
10/579,066

propenyl)oxy)methyl]propoxy)methyl]-2-[[ (1-oxo-2-propenyl)oxy)methyl]-  
1,3-propanediyl di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 29570-58-9

CMF C28 H34 O13



CM 2

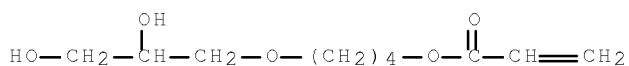
CRN 581070-18-0

CMF C10 H18 O5 . x (C9 H10 . C8 H8 . C3 H4 O2)x

CM 3

CRN 251298-12-1

CMF C10 H18 O5



CM 4

CRN 52831-04-6

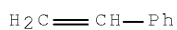
CMF (C9 H10 . C8 H8 . C3 H4 O2)x

CCI PMS

CM 5

CRN 100-42-5

CMF C8 H8

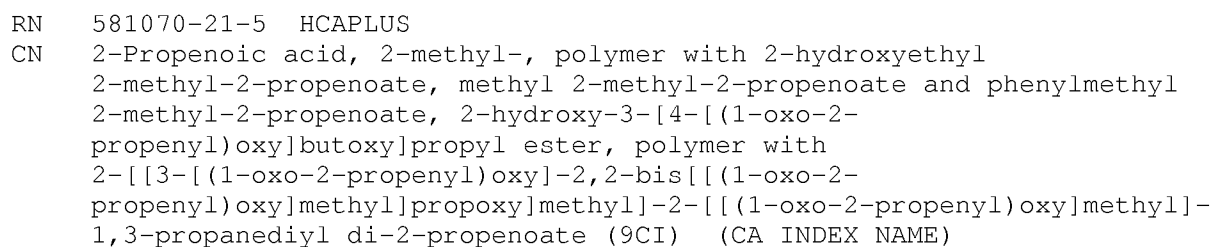


CM 6

CRN 98-83-9  
CMF C9 H10



CRN 79-10-7  
CMF C3 H4 O2



CM 1

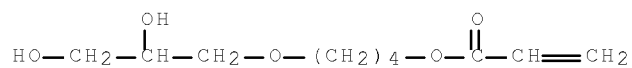
CRN 29570-58-9  
CMF C28 H34 O13



CRN 581070-19-1  
CMF (C11 H12 O2 . C6 H10 O3 . C5 H8 O2 . C4 H6 O2)x . x C10 H18 O5

CM 3

CRN 251298-12-1  
CMF C10 H18 O5



CM 4

CRN 191545-17-2

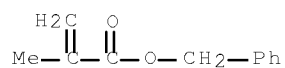
CMF (C11 H12 O2 . C6 H10 O3 . C5 H8 O2 . C4 H6 O2)x

CCI PMS

CM 5

CRN 2495-37-6

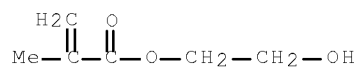
CMF C11 H12 O2



CM 6

CRN 868-77-9

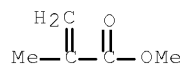
CMF C6 H10 O3



CM 7

CRN 80-62-6

CMF C5 H8 O2

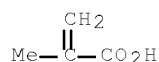


CM 8

CRN 79-41-4

CMF C4 H6 O2





- IC ICM G03F007-027  
ICS C08F290-12; G02B005-20; G03F007-004
- CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 38
- ST epoxy acrylate addn acrylic polymer color resist; color filter epoxy acrylate addn acrylic polymer
- IT Phenolic resins, reactions  
(epoxy, novolak, o-cresol, acrylate, tetrahydrophthalate, ester with 4-hydroxybutyl acrylate glycidyl ether, binder; high colorant concentration photopolymerizable compns. having good developability and solubility for color filters)
- IT Optical filters  
(high colorant concentration photopolymerizable compns. having good developability and solubility for color filters)
- IT Epoxy resins, reactions  
(phenolic, novolak, o-cresol, acrylate, tetrahydrophthalate, ester with 4-hydroxybutyl acrylate glycidyl ether, binder; high colorant concentration photopolymerizable compns. having good developability and solubility for color filters)
- IT 85-43-8DP, Tetrahydrophthalic anhydride, ester with o-cresol novolak epoxy acrylate, reaction products with 4-hydroxybutyl acrylate glycidyl ether 95-48-7DP, o-Cresol, novolak epoxy acrylate tetrahydrophthalate, ester with 4-hydroxybutyl acrylate glycidyl ether 119692-59-0DP, 4-Hydroxybutyl acrylate glycidyl ether, ester with o-cresol novolak epoxy acrylate tetrahydrophthalate 581070-18-0P, Acrylic acid- $\alpha$ -methylstyrene-styrene copolymer ester with 4-hydroxybutyl acrylate glycidyl ether 581070-19-1P  
(binder; high colorant concentration photopolymerizable compns. having good developability and solubility for color filters)
- IT 581070-20-4P, Acrylic acid- $\alpha$ -methylstyrene-styrene copolymer ester with 4-hydroxybutyl acrylate glycidyl ether, polymer with dipentaerythritol hexaacrylate 581070-21-5P, Benzyl methacrylate-2-hydroxyethylmethacrylate-methacrylic acid-methyl methacrylate copolymer ester with 4-hydroxybutyl acrylate glycidyl ether, polymer with dipentaerythritol hexaacrylate  
(crosslinked; high colorant concentration photopolymerizable compns. having good developability and solubility for color filters)
- IT 29570-58-9, Dipentaerythritol hexaacrylate  
(high colorant concentration photopolymerizable compns. having good developability and solubility for color filters)
- IT 492-98-8, 2,2'-Biimidazole 125051-32-3, CGI 784  
(photopolymn. initiator; high colorant concentration photopolymerizable compns. having good developability and solubility for color filters)
- IT 90-93-7, 4,4'-Bis(diethylamino)benzophenone  
(photosensitizer; high colorant concentration photopolymerizable compns. having good developability and solubility for color filters)

L50 ANSWER 19 OF 35 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2003:506812 HCAPLUS Full-text

DOCUMENT NUMBER: 139:86734

TITLE: Oxide-containing particles, their compositions,  
and their protective coatings for optical devicesINVENTOR(S): Yamada, Yoshitaka; Baba, Atsushi; Takatori,  
Masashige; Tanba, Kazuaki

PATENT ASSIGNEE(S): JSR Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 21 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003183537	A	20030703	JP 2001-385003	20011218
			<--	
JP 3893966	B2	20070314		
TW 225881	B	20050101	TW 2002-91124109	20021018
			<--	
CN 1427043	A	20030702	CN 2002-157900	20021218
			<--	
CN 1283709	C	20061108		
PRIORITY APPLN. INFO.:			JP 2001-385003	A 20011218
			<--	

ED Entered STN: 03 Jul 2003

AB The compns. comprise (A) particles prepared by reaction of (a)  $\geq 1$  element oxide particle chosen from Si, Al, Zr, Ti, Zn, Ge, In, Sn, Sb, and Ce and (b)  $\geq 1$  compound chosen from  $[R1X(CH2)mO(CH2)n]qSiR2rR34-q-r$ ,  $[R1X(CH2)mO(CH2)nO(CH2)p]qSiR2rR34-q-r$ ,  $(YR4)qSiR2rR34-q-r$ , and  $(GR4)qSiR2rR34-q-r$  [X = oxetane; Y = 3,4-epoxycyclohexyl; G = glycidyl; R1 = H, alkyl, F, fluoroalkyl, allyl, aryl, furyl, ethynyl; R2 = hydrolyzable group; R3 = alkyl; R4 = divalent organic group; m, n, p = 1-10; q, r = 1-3; (q + r)  $\leq 4$ ], (B) copolymers prepared from (c) epoxy-containing unsatd. compds. and (d) olefin-based unsatd. compds., and (C) other cationically polymerizable compds. Thus, a composition containing (A) 40 parts particles prepared by reaction of MEK ST (silica sol) and Sila-Ace S 510 ( $\gamma$ -glycidoxypropyltrimethoxysilane), (B) 100 parts glycidyl methacrylate-styrene copolymer, (C) 10 parts Epikote 157S65 (bisphenol A novolak epoxy resin), and (D) 35 parts trimellitic anhydride was applied on a glass plate and baked to give a coating with high transparency, improved adhesion, and pencil hardness 6H.

IT 157015-57-1P, Glycidyl methacrylate-methacrylic acid-styrene-tricyclo[5.2.1.0<sup>2,6</sup>]decan-8-yl methacrylate copolymer 405297-65-6P, N-Cyclohexylmaleimide-glycidyl methacrylate-methacrylic acid-styrene copolymer (polymer compns. containing oxide-containing particles for protective coatings of optical devices)

RN 157015-57-1 HCAPLUS

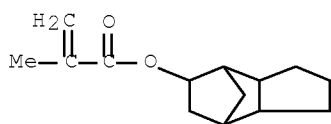
CN 2-Propenoic acid, 2-methyl-, polymer with ethenylbenzene, octahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate and 2-oxiranylmethyl 2-methyl-2-propenoate (CA INDEX NAME)

CM 1

CRN 34759-34-7

10/579,066

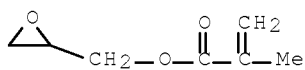
CMF C14 H20 O2



CM 2

CRN 106-91-2

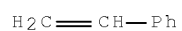
CMF C7 H10 O3



CM 3

CRN 100-42-5

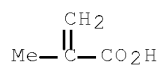
CMF C8 H8



CM 4

CRN 79-41-4

CMF C4 H6 O2



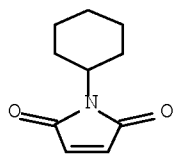
RN 405297-65-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with  
1-cyclohexyl-1H-pyrrole-2,5-dione, ethenylbenzene and 2-oxiranylmethyl  
2-methyl-2-propenoate (CA INDEX NAME)

CM 1

CRN 1631-25-0

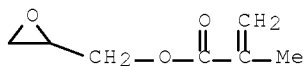
CMF C10 H13 N O2



CM 2

CRN 106-91-2

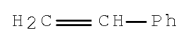
CMF C7 H10 O3



CM 3

CRN 100-42-5

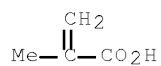
CMF C8 H8



CM 4

CRN 79-41-4

CMF C4 H6 O2



IT 552867-46-6P 552867-47-7P 552867-48-8P  
 552867-49-9P 552867-50-2P 552867-51-3P  
 552867-52-4P 552889-25-5P

(protective coatings containing oxide-containing particles of optical devices)

RN 552867-46-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with Epikote 157S65,  
 ethenylbenzene, octahydro-4,7-methano-1H-inden-5-yl  
 2-methyl-2-propenoate, oxiranylmethyl 2-methyl-2-propenoate, silica

10/579,066

and trimethoxy[3-(oxiranylmethoxy)propyl]silane (9CI) (CA INDEX NAME)

CM 1

CRN 137598-82-4

CMF Unspecified

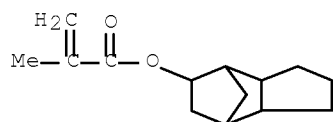
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 2

CRN 34759-34-7

CMF C14 H20 O2



CM 3

CRN 7631-86-9

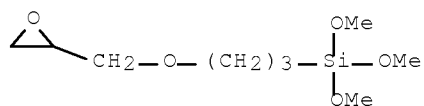
CMF O2 Si



CM 4

CRN 2530-83-8

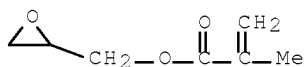
CMF C9 H20 O5 Si



CM 5

CRN 106-91-2

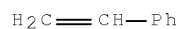
CMF C7 H10 O3



CM 6

CRN 100-42-5

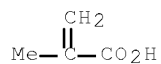
CMF C8 H8



CM 7

CRN 79-41-4

CMF C4 H6 O2



RN 552867-47-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with  
 1-cyclohexyl-1H-pyrrole-2,5-dione, Epikote 157S65, ethenylbenzene,  
 oxiranylmethyl 2-methyl-2-propenoate, silica and  
 trimethoxy[3-(oxiranylmethoxy)propyl]silane (9CI) (CA INDEX NAME)

CM 1

CRN 137598-82-4

CMF Unspecified

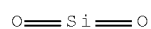
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 2

CRN 7631-86-9

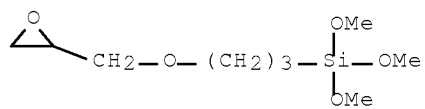
CMF O2 Si



CM 3

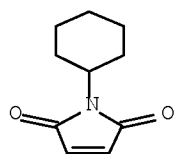
10/579,066

CRN 2530-83-8  
CMF C9 H20 O5 Si



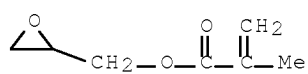
CM 4

CRN 1631-25-0  
CMF C10 H13 N O2



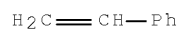
CM 5

CRN 106-91-2  
CMF C7 H10 O3



CM 6

CRN 100-42-5  
CMF C8 H8

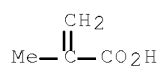


CM 7

CRN 79-41-4

10/579,066

CMF C4 H6 O2



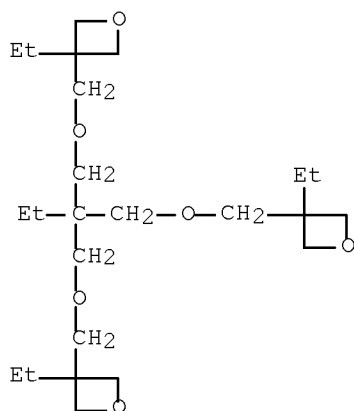
RN 552867-48-8 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with  
1-cyclohexyl-1H-pyrrole-2,5-dione, ethenylbenzene,  
3,3'-[[2-ethyl-2-[[[(3-ethyl-3-oxetanyl)methoxy]methyl]-1,3-  
propanediyl]bis(oxymethylene)]bis[3-ethyloxetane], oxiranylmethyl  
2-methyl-2-propenoate, silica and  
trimethoxy[2-(7-oxabicyclo[4.1.0]hept-3-yl)ethyl]silane (9CI) (CA  
INDEX NAME)

CM 1

CRN 180423-87-4

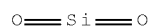
CMF C24 H44 O6



CM 2

CRN 7631-86-9

CMF O2 Si

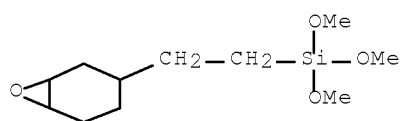


CM 3

CRN 3388-04-3

CMF C11 H22 O4 Si

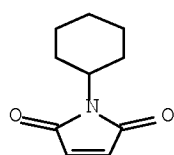




CM 4

CRN 1631-25-0

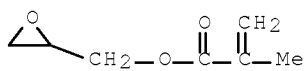
CMF C10 H13 N O2



CM 5

CRN 106-91-2

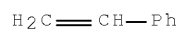
CMF C7 H10 O3



CM 6

CRN 100-42-5

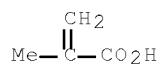
CMF C8 H8



CM 7

CRN 79-41-4

CMF C4 H6 O2



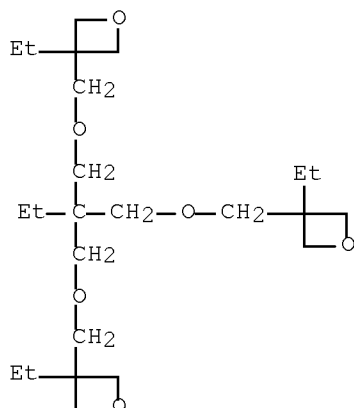
RN 552867-49-9 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with ethenylbenzene,  
3,3'-[[2-ethyl-2-[[ (3-ethyl-3-oxetanyl)methoxy]methyl]-1,3-  
propanediyl]bis(oxymethylene)]bis[3-ethyloxetane],  
octahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate,  
oxiranylmethyl 2-methyl-2-propenoate,  
trimethoxy[3-(oxiranylmethoxy)propyl]silane and zirconium oxide (ZrO<sub>2</sub>)  
(9CI) (CA INDEX NAME)

CM 1

CRN 180423-87-4

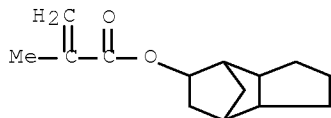
CMF C24 H44 O6



CM 2

CRN 34759-34-7

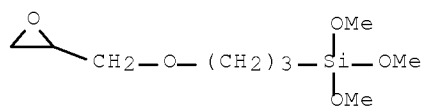
CMF C14 H20 O2



CM 3

CRN 2530-83-8

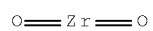
CMF C9 H20 O5 Si



CM 4

CRN 1314-23-4

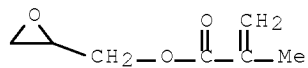
CMF O2 Zr



CM 5

CRN 106-91-2

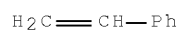
CMF C7 H10 O3



CM 6

CRN 100-42-5

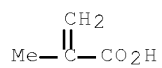
CMF C8 H8



CM 7

CRN 79-41-4

CMF C4 H6 O2



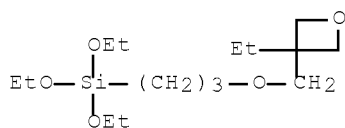
RN 552867-50-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with Epikote 157S65,  
ethenylbenzene, octahydro-4,7-methano-1H-inden-5-yl  
2-methyl-2-propenoate, oxiranylmethyl 2-methyl-2-propenoate,  
triethoxy[3-[(3-ethyl-3-oxetanyl)methoxy]propyl]silane and zirconium  
oxide (ZrO<sub>2</sub>) (9CI) (CA INDEX NAME)

CM 1

CRN 220520-33-2

CMF C15 H32 O5 Si



CM 2

CRN 137598-82-4

CMF Unspecified

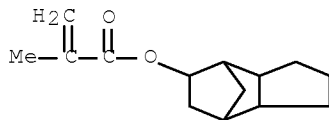
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 3

CRN 34759-34-7

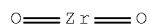
CMF C14 H20 O2



CM 4

CRN 1314-23-4

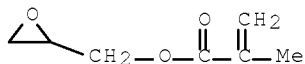
CMF O2 Zr



10/579,066

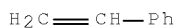
CM 5

CRN 106-91-2  
CMF C7 H10 O3



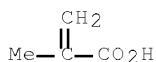
CM 6

CRN 100-42-5  
CMF C8 H8



CM 7

CRN 79-41-4  
CMF C4 H6 O2



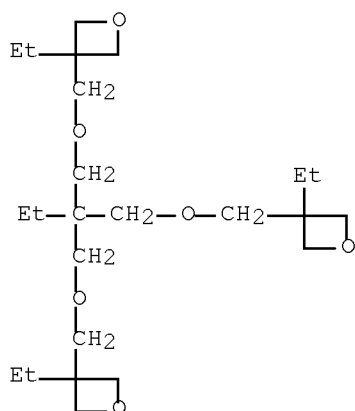
RN 552867-51-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with  
1-cyclohexyl-1H-pyrrole-2,5-dione, ethenylbenzene,  
3,3'-[[2-ethyl-2-[[ (3-ethyl-3-oxetanyl)methoxy]methyl]-1,3-  
propanediyl]bis(oxymethylene)]bis[3-ethyloxetane], oxiranylmethyl  
2-methyl-2-propenoate, silica and  
trimethoxy[3-(oxiranylmethoxy)propyl]silane (9CI) (CA INDEX NAME)

CM 1

CRN 180423-87-4  
CMF C24 H44 O6

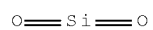
10/579,066



CM 2

CRN 7631-86-9

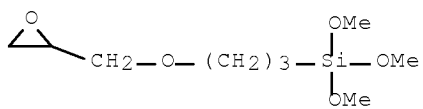
CMF O2 Si



CM 3

CRN 2530-83-8

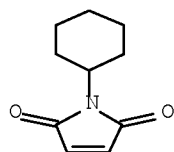
CMF C9 H20 O5 Si



CM 4

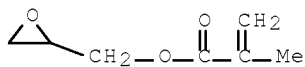
CRN 1631-25-0

CMF C10 H13 N O2



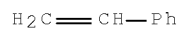
CM 5

CRN 106-91-2  
CMF C7 H10 O3



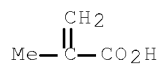
CM 6

CRN 100-42-5  
CMF C8 H8



CM 7

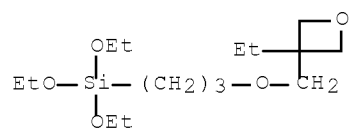
CRN 79-41-4  
CMF C4 H6 O2



RN 552867-52-4 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, polymer with  
1-cyclohexyl-1H-pyrrole-2,5-dione, Epikote 157S65, ethenylbenzene,  
oxiranylmethyl 2-methyl-2-propenoate, silica and  
triethoxy[3-[(3-ethyl-3-oxetanyl)methoxy]propyl]silane (9CI) (CA  
INDEX NAME)

CM 1

CRN 220520-33-2  
CMF C15 H32 O5 Si



CM 2

CRN 137598-82-4

CMF Unspecified

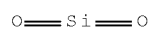
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 3

CRN 7631-86-9

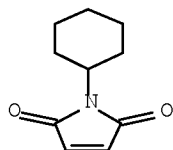
CMF O2 Si



CM 4

CRN 1631-25-0

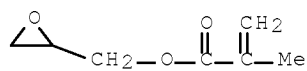
CMF C10 H13 N O2



CM 5

CRN 106-91-2

CMF C7 H10 O3



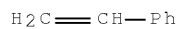


10/579,066

CM 6

CRN 100-42-5

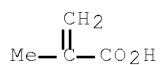
CMF C8 H8



CM 7

CRN 79-41-4

CMF C4 H6 O2



RN 552889-25-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with aluminum oxide (Al<sub>2</sub>O<sub>3</sub>), Epikote 157S65, ethenylbenzene, octahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate, oxiranylmethyl 2-methyl-2-propenoate and trimethoxy[3-(oxiranylmethoxy)propyl]silane (9CI) (CA INDEX NAME)

CM 1

CRN 137598-82-4

CMF Unspecified

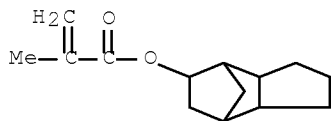
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 2

CRN 34759-34-7

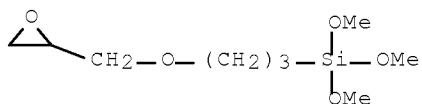
CMF C14 H20 O2



CM 3

CRN 2530-83-8

CMF C9 H20 O5 Si



CM 4

CRN 1344-28-1

CMF A12 O3

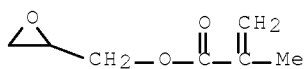
CCI MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 5

CRN 106-91-2

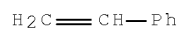
CMF C7 H10 O3



CM 6

CRN 100-42-5

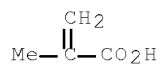
CMF C8 H8



CM 7

CRN 79-41-4

CMF C4 H6 O2



IC ICM C09C001-00  
 ICS C08K005-151; C08K009-06; C08L101-06; C09C003-12; C09D007-12;  
 C09D133-00; C09D201-06; G02F001-1333  
 CC 42-10 (Coatings, Inks, and Related Products)

Section cross-reference(s): 38, 73

IT Hybrid organic-inorganic materials

Optical filters

Optical instruments

(protective coatings containing oxide-containing particles of optical devices)

IT 25167-42-4P, Glycidyl methacrylate-styrene copolymer 147814-52-6P, Glycidyl methacrylate-tricyclo(5.2.1.02,6)decan-8-yl methacrylate copolymer 157015-57-1P, Glycidyl methacrylate-methacrylic acid-styrene-tricyclo[5.2.1.02,6]decan-8-yl methacrylate copolymer 405297-65-6P, N-Cyclohexylmaleimide-glycidyl methacrylate-methacrylic acid-styrene copolymer (polymer compns. containing oxide-containing particles for protective coatings of optical devices)

IT 552867-39-7P 552867-40-0P 552867-41-1P 552867-42-2P  
552867-43-3P 552867-44-4P 552867-45-5P ~~552867-46-6P~~  
~~552867-47-7P~~ ~~552867-48-8P~~ ~~552867-49-9P~~  
~~552867-50-2P~~ ~~552867-51-3P~~ ~~552867-52-4P~~  
552889-24-4P 552889-25-5P

(protective coatings containing oxide-containing particles of optical devices)

L50 ANSWER 20 OF 35 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2003:471005 HCAPLUS Full-text

DOCUMENT NUMBER: 139:44227

TITLE: Light-sensitive curable pattern forming resin in hardenable resin composition for spacers and for color filters in liquid crystal display

INVENTOR(S): Maeda, Keiji; Okazaki, Eiichi; Taguchi, Hirokane; Hasegawa, Mitsutaka; Hayashi, Shinji; Sega, Shunsuke

PATENT ASSIGNEE(S): Toa Gosei Chemical Industry Co., Ltd., Japan; Dai Nippon Printing Co., Ltd.

SOURCE: Jpn. Kokai Tokkyo Koho, 31 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

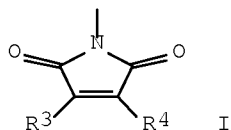
FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
JP 2003173025	A	20030620	JP 2002-181719	20020621
			<--	
JP 4014946	B2	20071128		
US 20030118922	A1	20030626	US 2002-255353	20020926
			<--	
US 7399574	B2	20080715		
PRIORITY APPLN. INFO.:			JP 2001-304411	A 20010928
			<--	
			JP 2002-108254	A 20020410
			<--	
			JP 2002-181719	A 20020621
			<--	

ED Entered STN: 20 Jun 2003

GI



AB The title resin is copolymer having repeating units of cyclic imides, repeating units of acidic groups, and repeating groups of photopolymerizable groups, wherein the cyclic polyimide is represented with general formula I (R3-4 = C≤4 alkyl, H, cyclic ring residue). The resin provides control on solubility in an alkaline and on hardening properties.

IT 544416-50-4P, N-(2-Methacryloyloxyethyl)tetrahydrophthalimide/methacrylic acid copolymer, glycidyl methacrylate ester 544416-52-6P, N-(2-Acryloyloxyethyl)tetrahydrophthalimide-methacrylic acid copolymer, glycidyl methacrylate ester (light-sensitive curable pattern forming resin in hardenable resin composition for color filters in liquid crystal display)

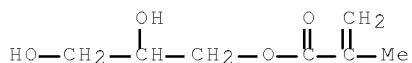
RN 544416-50-4 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with 2-(1,3,4,5,6,7-hexahydro-1,3-dioxo-2H-isoindol-2-yl)ethyl 2-methyl-2-propenoate, 2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl ester (9CI) (CA INDEX NAME)

CM 1

CRN 5919-74-4

CMF C7 H12 O4



CM 2

CRN 77945-63-2

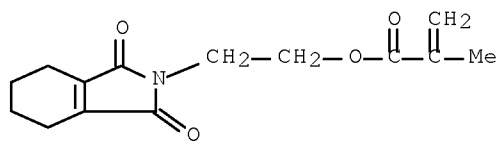
CMF (C14 H17 N O4 . C4 H6 O2)x

CCI PMS

CM 3

CRN 77945-62-1

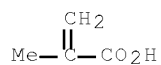
CMF C14 H17 N O4



CM 4

CRN 79-41-4

CMF C4 H6 O2



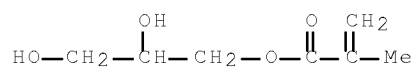
RN 544416-52-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with  
 2-(1,3,4,5,6,7-hexahydro-1,3-dioxo-2H-isoindol-2-yl)ethyl  
 2-propenoate, 2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl ester  
 (9CI) (CA INDEX NAME)

CM 1

CRN 5919-74-4

CMF C7 H12 O4



CM 2

CRN 544416-51-5

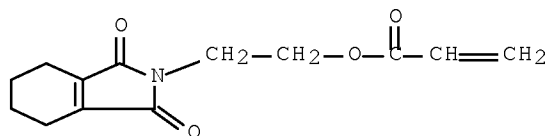
CMF (C13 H15 N O4 . C4 H6 O2) x

CCI PMS

CM 3

CRN 125350-99-4

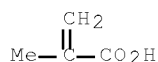
CMF C13 H15 N O4



CM 4

CRN 79-41-4

CMF C4 H6 O2



- IC ICM G03F007-038  
ICS C08F299-00; G02B005-20; G02F001-1335; G02F001-1339; G03F007-004
- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 35
- ST resin hardenable compn spacer color filter liq  
crystal display
- IT Liquid crystal displays  
Optical filters  
(light-sensitive curable pattern forming resin in hardenable resin composition for color filters in liquid crystal display)
- IT Photoimaging materials  
(photopolymerizable; light-sensitive curable pattern forming resin in hardenable resin composition for color filters in liquid crystal display)
- IT Photoimaging materials  
(resin; light-sensitive curable pattern forming resin in hardenable resin composition for color filters in liquid crystal display)
- IT 30674-80-7DP, reaction product with acrylic polymer 543736-91-0DP, N-(2-Methacryloyloxyethyl)tetrahydrophthalimide-methacrylic acid-2-hydroxyethyl methacrylate copolymer, reaction product with methacryloyloxyethyl isocyanate 543736-91-0P, N-(2-Methacryloyloxyethyl)tetrahydrophthalimide-methacrylic acid-2-hydroxyethyl methacrylate copolymer 544416-50-4P, N-(2-Methacryloyloxyethyl)tetrahydrophthalimide/methacrylic acid copolymer, glycidyl methacrylate ester 544416-52-6P, N-(2-Acryloyloxyethyl)tetrahydrophthalimide-methacrylic acid copolymer, glycidyl methacrylate ester  
(light-sensitive curable pattern forming resin in hardenable resin composition for color filters in liquid crystal display)

L50 ANSWER 21 OF 35 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2002:944730 HCAPLUS Full-text

DOCUMENT NUMBER: 138:31096

TITLE: Lactone ring-containing polymers, their manufacture, and their use in photopolymer compositions for color filters and display devices

INVENTOR(S): Kaneko, Tomomasa; Asano, Hideo; Yamaguchi, Minoru; Ueda, Kenichi; Yoshida, Masatoshi; Kataoka, Shingo

PATENT ASSIGNEE(S): Nippon Shokubai Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 23 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
JP 2002356520	A	20021213	JP 2002-6713	20020115

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PRIORITY APPLN. INFO.: JP 2001-93427 A 20010328

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ED Entered STN: 13 Dec 2002

AB The polymers having radical-polymerizable double bonds in side chains are manufactured by addition-reacting acid groups of lactone ring-containing polymers consisting of 2-(hydroxyalkyl) acrylate esters and acid group-containing monomers with radical-polymerizable double bond-containing compds. having functional groups reactable with the acid groups. The photopolymer compns. containing the above polymers in post-baking process do not show soiling of substrates, smoothness decrease, thickness decrease, or discoloration and do give uniform films with high strength.

IT 478167-88-3P, Ethyl 2-(hydroxymethyl)acrylate-methacrylic acid-methyl methacrylate copolymer glycidyl methacrylate ester 478167-89-4P, Ethyl 2-(hydroxymethyl)acrylate-methacrylic acid copolymer glycidyl methacrylate ester 478167-90-7P, Methacrylic acid-methyl methacrylate-methyl 2-(hydroxymethyl)acrylate copolymer glycidyl methacrylate ester (manufacture of lactone ring-containing photopolymers for color filters and displays)

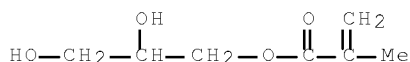
RN 478167-88-3 HCAPLUS

CN 2-Propenoic acid, 2-(hydroxymethyl)-, ethyl ester, polymer with methyl 2-methyl-2-propenoate and 2-methyl-2-propenoic acid, 2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl ester (9CI) (CA INDEX NAME)

CM 1

CRN 5919-74-4

CMF C7 H12 O4



CM 2

CRN 444753-51-9

CMF (C6 H10 O3 . C5 H8 O2 . C4 H6 O2)x

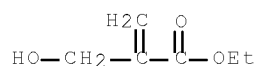
CCI PMS

CM 3

CRN 10029-04-6

10/579,066

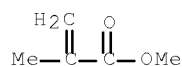
CMF C6 H10 O3



CM 4

CRN 80-62-6

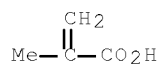
CMF C5 H8 O2



CM 5

CRN 79-41-4

CMF C4 H6 O2



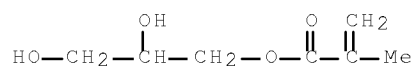
RN 478167-89-4 HCAPLUS

CN 2-Propenoic acid, 2-(hydroxymethyl)-, ethyl ester, polymer with  
2-methyl-2-propenoic acid, 2-hydroxy-3-[(2-methyl-1-oxo-2-  
propenyl)oxy]propyl ester (9CI) (CA INDEX NAME)

CM 1

CRN 5919-74-4

CMF C7 H12 O4



CM 2

CRN 218767-65-8

CMF (C6 H10 O3 . C4 H6 O2)x

CCI PMS

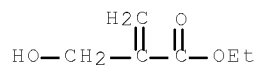


10/579,066

CM 3

CRN 10029-04-6

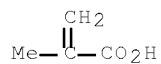
CMF C6 H10 O3



CM 4

CRN 79-41-4

CMF C4 H6 O2



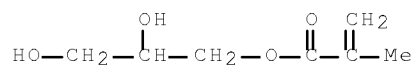
RN 478167-90-7 HCAPLUS

CN 2-Propenoic acid, 2-(hydroxymethyl)-, methyl ester, polymer methyl 2-methyl-2-propenoate and 2-methyl-2-propenoic acid, 2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl ester (9CI) (CA INDEX NAME)

CM 1

CRN 5919-74-4

CMF C7 H12 O4



CM 2

CRN 400709-67-3

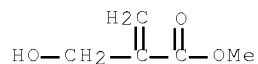
CMF (C5 H8 O3 . C5 H8 O2 . C4 H6 O2)x

CCI PMS

CM 3

CRN 15484-46-5

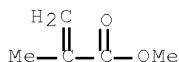
CMF C5 H8 O3



CM 4

CRN 80-62-6

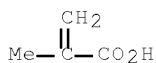
CMF C5 H8 O2



CM 5

CRN 79-41-4

CMF C4 H6 O2



- IC ICM C08F220-28  
ICS C08F008-00; C08F290-12; G02B001-04; G02B005-20; G03F007-038
- CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 38
- ST lactone ring photopolymer color filter display  
device; hydroxyalkyl acrylate polymer addn double bond photopolymer
- IT Liquid crystal displays  
(color; manufacture of lactone ring-containing photopolymers for color filters and displays)
- IT Optical filters  
Photoresists  
(manufacture of lactone ring-containing photopolymers for color filters and displays)
- IT 400709-67-3DP, isopropenyloxazoline ester 478167-88-3P,  
Ethyl 2-(hydroxymethyl)acrylate-methacrylic acid-methyl methacrylate copolymer glycidyl methacrylate ester  
478167-89-4P, Ethyl 2-(hydroxymethyl)acrylate-methacrylic acid copolymer glycidyl methacrylate ester  
478167-90-7P, Methacrylic acid-methyl methacrylate-methyl 2-(hydroxymethyl)acrylate copolymer glycidyl methacrylate ester  
(manufacture of lactone ring-containing photopolymers for color filters and displays)
- IT 15625-89-5, Trimethylolpropane triacrylate  
(photopolymer composition containing; manufacture of lactone ring-containing photopolymers for color filters and displays)

DOCUMENT NUMBER: 137:270690  
 TITLE: Photosensitive solventless adhesive compositions  
 with light scattering properties for color  
 filters and transfer-type color  
 filters therewith  
 INVENTOR(S): Kawashima, Masayuki; Maeda, Tadatoshi; Hoshi,  
 Hisao; Hirayama, Shigeru; Suda, Hironobu;  
 Nishimoto, Toyoshi  
 PATENT ASSIGNEE(S): Toppan Printing Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002275432	A	20020925	JP 2001-82464	20010322

PRIORITY APPLN. INFO.: JP 2001-82464 20010322  
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ED Entered STN: 25 Sep 2002

AB Title compns. comprise acrylic type-resins with ethylenically unsatd. groups and carboxyl groups, diluent monomers, photosensitizers, and transparent particles. The filters are especially useful for reflection-type liquid crystal displays. Thus, an adhesive composition comprising glycidyl methacrylate-Me methacrylate copolymer acrylic acid tetrahydrophthalic anhydride ester (preparation given) 50, TMP 3A 50, hydroxyethyl methacrylate 40, 1,6-hexanediol dimethacrylate 40, Viscoat 2000 10, 1-hydroxycyclohexyl Ph ketone 10, metoquinone 0.1, glycidyloxypropyltrimethoxysilane 10, bisphenol A diglycidyl ether 15, and Tospearl 120 40 g was applied on a transfer sheet comprising a color filter layer and a light blocking layer, irradiated with UV using a photomask, an extra adhesive was removed by an alkali solution, and post-baked to give a transfer-type color filter.

IT 163658-81-9P  
 (photosensitive solventless adhesive compns. with light scattering properties for color filters)

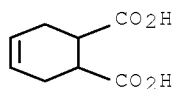
RN 163658-81-9 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with oxiranylmethyl  
 2-methyl-2-propenoate, hydrogen 4-cyclohexene-1,2-dicarboxylate  
 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 88-98-2

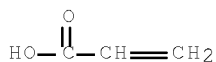
CMF C8 H10 O4



CM 2

CRN 79-10-7

CMF C3 H4 O2



CM 3

CRN 26141-88-8

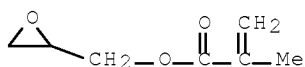
CMF (C7 H10 O3 . C5 H8 O2)x

CCI PMS

CM 4

CRN 106-91-2

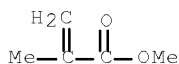
CMF C7 H10 O3



CM 5

CRN 80-62-6

CMF C5 H8 O2

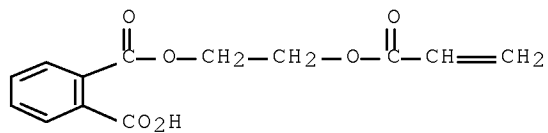


- IT 461650-85-1F, Glycidyl methacrylate-methyl methacrylate copolymer ester with acrylic acid and tetrahydrophthalic anhydride, polymer with trimethylolpropane trimethacrylate, hydroxyethyl methacrylate, 1,6-hexanediol dimethacrylate, Viscoat 2000, glycidylpropyltrimethoxysilane and bisphenol A diglycidyl ether (photosensitive solventless adhesive compns. with light scattering properties for color filters)
- RN 461650-85-1 HCAPLUS
- CN 1,2-Benzenedicarboxylic acid, mono[2-[(1-oxo-2-propenyl)oxy]ethyl] ester, polymer with 2-ethyl-2-[[[(2-methyl-1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl bis(2-methyl-2-propenoate), 1,6-hexanediyl bis(2-methyl-2-propenoate), 2-hydroxyethyl 2-methyl-2-propenoate, 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis[oxirane], methyl 2-methyl-2-propenoate polymer with oxiranylmethyl 2-methyl-2-propenoate 4-cyclohexene-1,2-dicarboxylate 2-propenoate, and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 30697-40-6

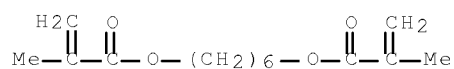
CMF C13 H12 O6



CM 2

CRN 6606-59-3

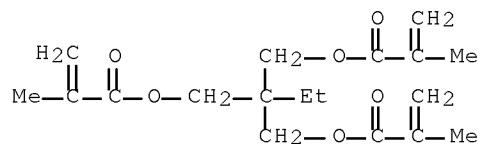
CMF C14 H22 O4



CM 3

CRN 3290-92-4

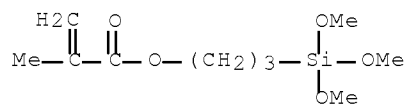
CMF C18 H26 O6



CM 4

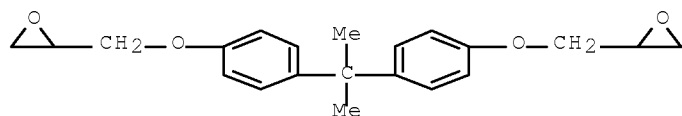
CRN 2530-85-0

CMF C10 H20 O5 Si



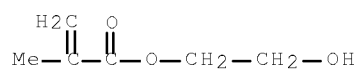
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CRN 1675-54-3  
 CMF C21 H24 O4



CM 6

CRN 868-77-9  
 CMF C6 H10 O3

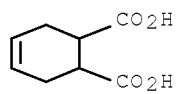


CM 7

CRN 163658-81-9  
 CMF C8 H10 O4 . x (C7 H10 O3 . C5 H8 O2)x . x C3 H4 O2

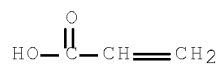
CM 8

CRN 88-98-2  
 CMF C8 H10 O4



CM 9

CRN 79-10-7  
 CMF C3 H4 O2



CM 10

CRN 26141-88-8

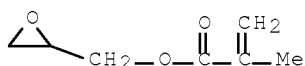
CMF (C7 H10 O3 . C5 H8 O2)x

CCI PMS

CM 11

CRN 106-91-2

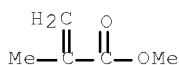
CMF C7 H10 O3



CM 12

CRN 80-62-6

CMF C5 H8 O2



- IC ICM C09J004-00  
ICS C09J011-00; C09J157-00; G02B005-02; G02B005-20; G02F001-1335
- CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 38
- ST photosensitive solventless acrylic adhesive light scattering  
color filter prepn; acrylic optical filter adhesive  
reflection type liq crystal display
- IT Silsesquioxanes  
(Me, Tospearl 120, transparent particles; photosensitive solventless adhesive compns. with light scattering properties for color filters)
- IT Adhesives  
(photocurable; photosensitive solventless adhesive compns. with light scattering properties for color filters)
- IT Optical filters  
(photosensitive solventless adhesive compns. with light scattering properties for color filters)
- IT 163658-81-9P  
(photosensitive solventless adhesive compns. with light scattering properties for color filters)
- IT 461650-85-1P, Glycidyl methacrylate-methyl methacrylate copolymer ester with acrylic acid and tetrahydrophthalic anhydride, polymer with trimethylolpropane trimethacrylate, hydroxyethyl

methacrylate, 1,6-hexanediol dimethacrylate, Viscoat 2000,  
glycidyloxypropyltrimethoxysilane and bisphenol A diglycidyl ether  
(photosensitive solventless adhesive compns. with light scattering  
properties for color filters)

IT 947-19-3, 1-Hydroxycyclohexyl phenyl ketone  
(photosensitizer; photosensitive solventless adhesive compns. with  
light scattering properties for color filters)

L50 ANSWER 23 OF 35 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2002:553160 HCAPLUS Full-text

DOCUMENT NUMBER: 137:110255

TITLE: Photopolymerizable compositions and their use in  
color filter manufacture

INVENTOR(S): Uchikawa, Kiyoshi; Shinoda, Masaru; Onodera,  
Junichi

PATENT ASSIGNEE(S): Tokyo Ohka Kogyo Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

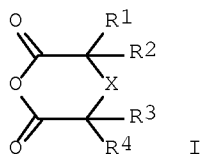
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE -----
JP 2002206014	A	20020726	JP 2001-1979	20010109
			<--	
PRIORITY APPLN. INFO.:			JP 2001-1979	20010109
			<--	

ED Entered STN: 26 Jul 2002

GI



AB The compns. having high transparency, adhesion, storage stability, resistance to heat and chems., etc., suitable for use in liquid crystal displays, comprise photopolymn. initiators and unsatd. compds. obtained by reacting epoxy compds. with unsatd. organic acids and then with acid anhydrides I (X = CH<sub>2</sub>, CH, O, NH, N:, NR<sub>5</sub>, CHR<sub>5</sub>, CR<sub>5</sub>R<sub>6</sub>; R<sub>1</sub>-R<sub>6</sub> = H, linear, branched, or cyclic C<sub>1</sub>-12 alkyl optionally containing unsatd. bond or Si group, Ph, NH<sub>2</sub>, halo, nothing). Thus, fluorene-type epoxy resin was reacted with acrylic acid to give 9,9-bis[4-[(2-hydroxy-3-acryloxy)propoxy]phenyl]fluorene, which was reacted with glutaric anhydride and benzophenonetetracarboxylic dianhydride to give an unsatd. compound A composition containing the unsatd. compound, pentaerythritol tetraacrylate, and Irgacure 369 (photopolymn. initiator) was applied on a glass substrate, dried, and UV-irradiated, developed, and baked to give a film showing high transparency, good adhesion to substrate, and no discoloration.

IT 443309-13-SP

(photopolymerizable compns. and their use in color  
filter manufacture)

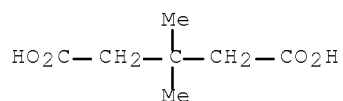


10/579,066

RN 443309-13-5 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, oxiranylmethyl ester, polymer with  
phenylmethyl 2-methyl-2-propenoate, hydrogen 3,3-dimethylpentanedioate  
2-propenoate (9CI) (CA INDEX NAME)

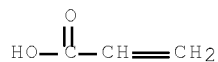
CM 1

CRN 4839-46-7  
CMF C7 H12 O4



CM 2

CRN 79-10-7  
CMF C3 H4 O2

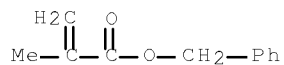


CM 3

CRN 86249-19-6  
CMF (C11 H12 O2 . C7 H10 O3)x  
CCI PMS

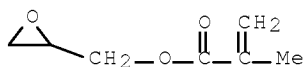
CM 4

CRN 2495-37-6  
CMF C11 H12 O2



CM 5

CRN 106-91-2  
CMF C7 H10 O3



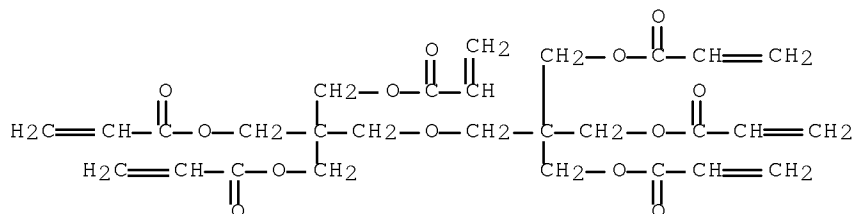
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IT      443309-15-7P
        (photopolymerizable compns. and their use in color
        filter manufacture)
RN      443309-15-7   HCAPLUS
CN      2-Propenoic acid, 2-methyl-, oxiranylmethyl ester, polymer with
        phenylmethyl 2-methyl-2-propenoate, hydrogen 3,3-dimethylpentanedioate
        2-propenoate, polymer with 2-[[[3-[(1-oxo-2-propenyl)oxy]-2,2-bis[[[1-
        oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[[1-oxo-2-
        propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate (9CI)   (CA INDEX
        NAME)

CM      1

CRN     29570-58-9
CMF     C28 H34 O13

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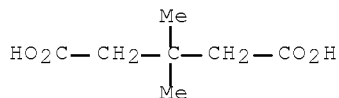
CM      2

CRN      443309-13-5
CMF      (C11 H12 O2 . C7 H10 O3)x . x C7 H12 O4 . x C3 H4 O2

CM      3

CRN      4839-46-7
CMF      C7 H12 O4

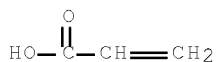
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CM 4

CRN 79-10-7

CMF C3 H4 O2



CM 5

CRN 86249-19-6

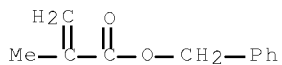
CMF (C11 H12 O2 . C7 H10 O3)x

CCI PMS

CM 6

CRN 2495-37-6

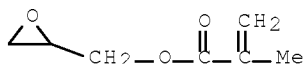
CMF C11 H12 O2



CM 7

CRN 106-91-2

CMF C7 H10 O3



- IC ICM C08F299-02  
ICS C08F002-44; C08F002-50; C08G059-14; G03F007-027
- CC 38-3 (Plastics Fabrication and Uses)  
Section cross-reference(s): 73, 74
- ST photopolymerizable resin compn **color filter** manuf  
LCD; epoxy resin acrylate acid anhydride product photopolymn; fluorene  
epoxy resin acrylate anhydride product photopolymn; glutaric anhydride  
epoxy acrylate product photopolymn; pentaerythritol tetraacrylate  
photopolymerizable compn **color filter**
- IT Epoxy resins, uses  
(acrylic, crosslinked; photopolymerizable compns. and their use in  
**color filter** manufacture)
- IT Liquid crystal displays  
(color; photopolymerizable compns. and their use in **color**  
**filter** manufacture)
- IT Optical filters  
(photopolymerizable compns. and their use in **color**

filter manufacture)  
 IT 4687-94-9P 143182-97-2P 443285-94-7P 443308-33-6P  
~~443309-13-5P~~  
 (photopolymerizable compns. and their use in color  
 filter manufacture)  
 IT 443285-95-8P ~~443309-15-7P~~ 443309-16-8P 443309-53-3P  
 (photopolymerizable compns. and their use in color  
 filter manufacture)  
 IT 110-94-1, Glutaric acid 2421-28-5, Benzophenonetetracarboxylic  
 dianhydride 4986-89-4, Pentaerythritol tetraacrylate 5662-95-3,  
 3,3-Tetramethyleneglutaric anhydride 29570-58-9, Dipentaerythritol  
 hexaacrylate 65697-21-4, Benzyl methacrylate-methacrylic acid  
 copolymer  
 (photopolymerizable compns. and their use in color  
 filter manufacture)

L50 ANSWER 24 OF 35 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2001:210122 HCAPLUS Full-text

DOCUMENT NUMBER: 134:245317

TITLE: Radiation-sensitive epoxy (meth)acrylate  
 composition and color filter  
 obtained from it

INVENTOR(S): Yoshida, Koichiro; Sakurai, Koichi; Aoyama,  
 Satoko; Watanabe, Takeshi

PATENT ASSIGNEE(S): JSR Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

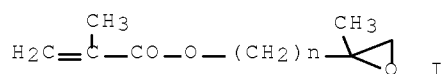
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2001075273	A	20010323	JP 1999-250063	19990903
			<--	
JP 4075243	B2	20080416		
PRIORITY APPLN. INFO.:			JP 1999-250063	19990903
			<--	

ED Entered STN: 23 Mar 2001

GI



AB The composition contains colorants, alkali-soluble resins containing  
 copolymers of epoxy (meth)acrylate derivs. I (R = H, Me; n = 1-5) and other  
 comonomers, polyfunctional monomers, and photopolymn. initiators. The color  
 filter has imaging elements obtained from the above composition The  
 composition shows good storage stability and its cured product shows good  
 scratch resistance.

IT 330666-19-8P, Benzyl methacrylate-dipentaerythritol  
 hexaacrylate-2-hydroxyethyl methacrylate-methacrylic  
 acid-2-methylglycidyl methacrylate copolymer 330666-20-1P,

10/579,066

Benzyl methacrylate-dipentaerythritol hexaacrylate-glycerol monomethacrylate-methacrylic acid-2-methylglycidyl methacrylate copolymer 330666-21-2P, Benzyl methacrylate-dipentaerythritol hexaacrylate-methacrylic acid-2-methylglycidyl methacrylate-mono(2-methacryloyloxyethyl) succinate-styrene copolymer 330666-22-3P, Dipentaerythritol hexaacrylate-2-hydroxyethyl methacrylate-methacrylic acid-2-methylglycidyl acrylate-N-phenylmaleimide-styrene copolymer (radiation-sensitive epoxy (meth)acrylate composition with good storage stability for color filter)

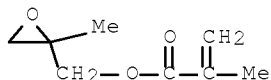
RN 330666-19-8 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with 2-hydroxyethyl 2-methyl-2-propenoate, (2-methyloxiranyl)methyl 2-methyl-2-propenoate, 2-[[3-[(1-oxo-2-propenyl)oxy]-2,2-bis[[[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate and phenylmethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 41768-20-1

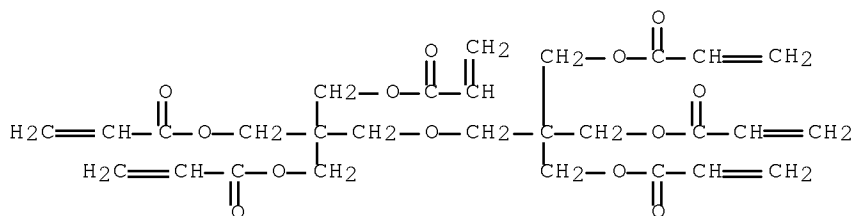
CMF C8 H12 O3



CM 2

CRN 29570-58-9

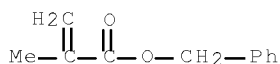
CMF C28 H34 O13



CM 3

CRN 2495-37-6

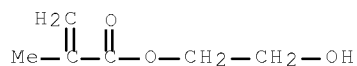
CMF C11 H12 O2



CM 4

CRN 868-77-9

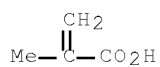
CMF C6 H10 O3



CM 5

CRN 79-41-4

CMF C4 H6 O2



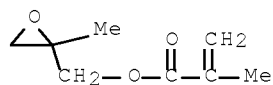
RN 330666-20-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with (2-methyloxiranyl)methyl 2-methyl-2-propenoate, 2-[[[3-[(1-oxo-2-propenyl)oxy]-2,2-bis[[[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate, phenylmethyl 2-methyl-2-propenoate and 1,2,3-propanetriol mono(2-methyl-2-propenoate) (9CI) (CA INDEX NAME)

CM 1

CRN 41768-20-1

CMF C8 H12 O3

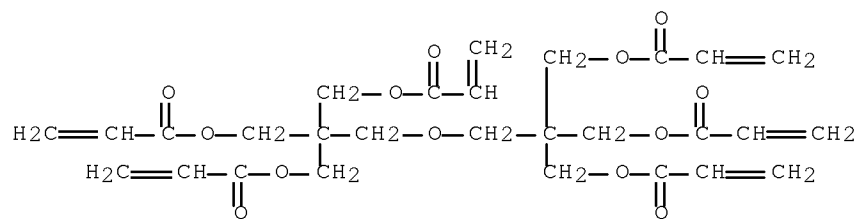


CM 2

CRN 29570-58-9

CMF C28 H34 O13

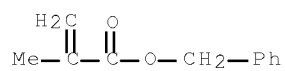
10/579,066



CM 3

CRN 2495-37-6

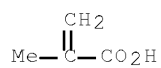
CMF C11 H12 O2



CM 4

CRN 79-41-4

CMF C4 H6 O2



CM 5

CRN 50853-28-6

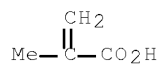
CMF C7 H12 O4

CCI IDS

CM 6

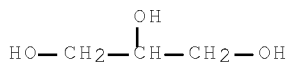
CRN 79-41-4

CMF C4 H6 O2



CM 7

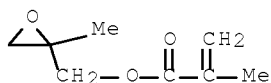
CRN 56-81-5  
CMF C3 H8 O3



RN 330666-21-2 HCAPLUS  
CN Butanedioic acid, mono[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl] ester, polymer with ethenylbenzene, (2-methyloxiranyl)methyl 2-methyl-2-propenoate, 2-methyl-2-propenoic acid, 2-[[3-[(1-oxo-2-propenyl)oxy]-2,2-bis[[[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate and phenylmethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

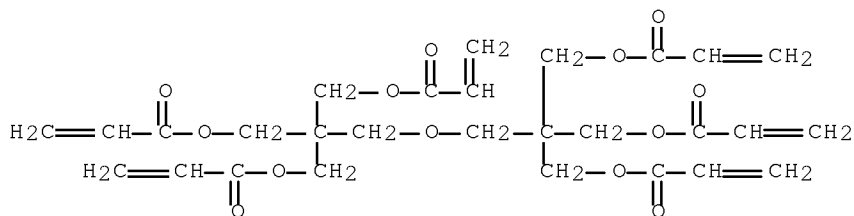
CM 1

CRN 41768-20-1  
CMF C8 H12 O3



CM 2

CRN 29570-58-9  
CMF C28 H34 O13

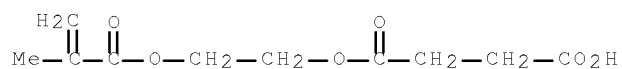


CM 3

CRN 20882-04-6  
CMF C10 H14 O6



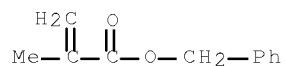
10/579,066



CM 4

CRN 2495-37-6

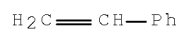
CMF C11 H12 O2



CM 5

CRN 100-42-5

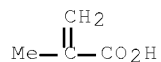
CMF C8 H8



CM 6

CRN 79-41-4

CMF C4 H6 O2



RN 330666-22-3 HCAPLUS

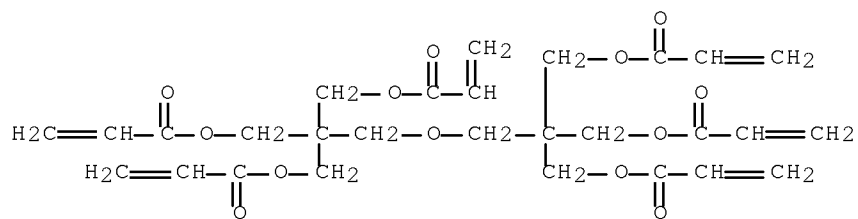
CN 2-Propenoic acid, 2-methyl-, polymer with ethenylbenzene,  
2-hydroxyethyl 2-methyl-2-propenoate, (2-methyloxiranyl)methyl  
2-propenoate, 2-[[[3-[(1-oxo-2-propenyl)oxy]-2,2-bis[[[(1-oxo-2-  
propenyl)oxy]methyl]propoxy]methyl]-2-[[[(1-oxo-2-propenyl)oxy]methyl]-  
1,3-propanediyl di-2-propenoate and 1-phenyl-1H-pyrrole-2,5-dione  
(9CI) (CA INDEX NAME)

CM 1

CRN 29570-58-9

CMF C28 H34 O13

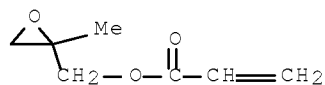
10/579,066



CM 2

CRN 19900-46-0

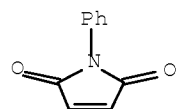
CMF C7 H10 O3



CM 3

CRN 941-69-5

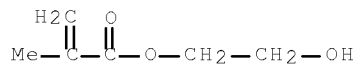
CMF C10 H7 N O2



CM 4

CRN 868-77-9

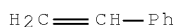
CMF C6 H10 O3



CM 5

CRN 100-42-5

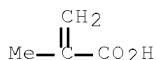
CMF C8 H8



CM 6

CRN 79-41-4

CMF C4 H6 O2



- IC ICM G03F007-027  
ICS G02B005-20; G03F007-004
- CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- ST radiation sensitive epoxy methacrylate color filter  
; acrylic glycidyl radiation sensitive color filter  
; storage stability scratch resistance color filter
- IT Epoxy resins, uses  
(acrylic; radiation-sensitive epoxy (meth)acrylate composition with good storage stability for color filter)
- IT Optical filters  
(radiation-sensitive epoxy (meth)acrylate composition with good storage stability for color filter)
- IT 147-14-8, C.I. Pigment Blue 15 4051-63-2, C.I. Pigment Red 177  
14302-13-7, C.I. Pigment Green 36  
(colorant; radiation-sensitive epoxy (meth)acrylate composition with good storage stability for color filter)
- IT 149-30-4, 2-Mercaptobenzothiazole 7189-83-5,  
2,2'-Bis(2,4-dichlorophenyl)-4,4',5,5'-tetraphenyl-1,2'-biimidazole  
119313-12-1  
(photopolymn. initiator; radiation-sensitive epoxy (meth)acrylate composition with good storage stability for color filter)
- IT 90-93-7, 4,4'-Bis(diethylamino)benzophenone  
(radiation-sensitive epoxy (meth)acrylate composition with good storage stability for color filter)
- IT 330666-19-8P, Benzyl methacrylate-dipentaerythritol hexaacrylate-2-hydroxyethyl methacrylate-methacrylic acid-2-methylglycidyl methacrylate copolymer 330666-20-1P, Benzyl methacrylate-dipentaerythritol hexaacrylate-glycerol monomethacrylate-methacrylic acid-2-methylglycidyl methacrylate copolymer 330666-21-2P, Benzyl methacrylate-dipentaerythritol hexaacrylate-methacrylic acid-2-methylglycidyl methacrylate-mono(2-methacryloyloxyethyl) succinate-styrene copolymer 330666-22-3P, Dipentaerythritol hexaacrylate-2-hydroxyethyl methacrylate-methacrylic acid-2-methylglycidyl acrylate-N-phenylmaleimide-styrene copolymer (radiation-sensitive epoxy (meth)acrylate composition with good storage stability for color filter)
- IT 29570-58-9, Dipentaerythritol hexaacrylate 330666-15-4, Benzyl methacrylate-2-hydroxyethyl methacrylate-methacrylic

acid-2-methylglycidyl methacrylate copolymer 330666-16-5, Benzyl  
methacrylate-glycerol monomethacrylate-methacrylic  
acid-2-methylglycidyl methacrylate copolymer 330666-17-6, Benzyl  
methacrylate-methacrylic acid-2-methylglycidyl  
methacrylate-mono(2-methacryloyloxyethyl) succinate-styrene copolymer  
330666-18-7, 2-Hydroxyethyl methacrylate-methacrylic  
acid-2-methylglycidyl acrylate-N-phenylmaleimide-styrene copolymer  
(radiation-sensitive epoxy (meth)acrylate composition with good storage  
stability for color filter)

L50 ANSWER 25 OF 35 HCAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 1999:699268 HCAPLUS Full-text  
DOCUMENT NUMBER: 131:329949  
TITLE: Functional material releasing structure for  
storage of color filter  
material  
INVENTOR(S): Suzuki, Nobuo  
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 18 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
JP 11302627	A	19991102	JP 1998-107927	19980417

PRIORITY APPLN. INFO.: JP 1998-107927 19980417  
<--

ED Entered STN: 02 Nov 1999

AB The functional material releasing structure has a resin containing functional materials such as a polymerization inhibitor and a dispersing agent, wherein the resin slowly releasing the functional materials in a solution and is insol. in the solution The structure improve the shelf-life of a color filter material.

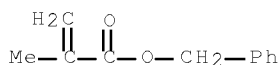
IT ~~248269-70-7P~~, Methacrylic acid-benzyl  
methacrylate-2-hydroxypropyl methacrylate-cyclohexyl methacrylate  
copolymer  
(functional material for storing color filter  
material)

RN 248269-70-7 HCAPLUS

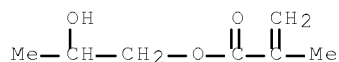
CN 2-Propenoic acid, 2-methyl-, polymer with cyclohexyl  
2-methyl-2-propenoate, 2-hydroxypropyl 2-methyl-2-propenoate and  
phenylmethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

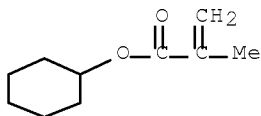
CRN 2495-37-6  
CMF C11 H12 O2



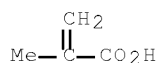
CM 2

CRN 923-26-2  
CMF C7 H12 O3

CM 3

CRN 101-43-9  
CMF C10 H16 O2

CM 4

CRN 79-41-4  
CMF C4 H6 O2

- IC ICM C09K003-00  
ICS B65D065-42; G02B005-20; G02B005-22; G03F007-004
- CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 47, 73
- ST functional material resin color filter storage
- IT Carbon black, uses  
(functional material for storing color filter material)
- IT Containers  
Optical filters  
(functional material such as polymerization inhibitor and dispersing agent slowly releasing structure to store color filter material)
- IT 947-19-3, 1-Hydroxycyclohexylphenyl ketone  
(Irgacure 184; functional material for storing color filter material)
- IT 55765-89-4P, Methyl methacrylate-ethyl methacrylate-methacrylic acid copolymer 248269-68-3P, Ethyl methacrylate-benzyl

methacrylate-styrene-glycidyl methacrylate copolymer  
~~248269-70-7P~~, Methacrylic acid-benzyl  
 methacrylate-2-hydroxypropyl methacrylate-cyclohexyl methacrylate  
 copolymer

(functional material for storing color filter  
 material)

IT 12236-62-3, C.I. Pigment Orange 36 248605-74-5  
 (functional material for storing color filter  
 material)

IT 90-94-8, Michler's ketone 147-14-8, C.I. Pigment Blue 15:6  
 150-76-5, p-Methoxyphenol 1326-04-1, C.I. Pigment Violet 2  
 1707-68-2, 2-(o-Chlorophenyl)-4,5-diphenylimidazolyl dimer  
 4051-63-2, C.I. Pigment Red 177 36888-99-0, C.I. Pigment Yellow 139  
 51473-56-4, Vinylmethoxy silane 55919-77-2 86772-78-3, Methacrylic  
 acid-ethyl methacrylate-2-hydroxyethyl methacrylate-butyl methacrylate  
 copolymer 98112-40-4, BM 1000 100752-97-4, Diethylthioxanthone  
 215247-95-3  
 (functional material for storing color filter  
 material)

L50 ANSWER 26 OF 35 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1999:481477 HCAPLUS Full-text

DOCUMENT NUMBER: 131:145868

TITLE: Photopolymerizable pigment dispersing agents and  
 photosensitive colored compositions and

compositions for light blocking layers therewith

INVENTOR(S): Kiyohara, Kinko; Sega, Shunsuke; Inoue, Akira;  
 Ando, Masayuki

PATENT ASSIGNEE(S): Dai Nippon Printing Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
JP 11209554	A	19990803	JP 1998-15428	19980128

<--

PRIORITY APPLN. INFO.: JP 1998-15428 19980128

<--

ED Entered STN: 04 Aug 1999

AB Title dispersing agents, useful for pigment-dispersed color resist compns. for  
~~color filter~~ preparation, are graft polymers comprising hydrophilic main  
 chains and hydrophobic side chains or hydrophobic main chains and hydrophilic  
 side chains and have ethylenic unsatd. double bonds in the main and/or side  
 chains. Thus, AA 6 methacryloyl-monoterminated poly(Me methacrylate) oligomer  
 52,4, 2-hydroxyethyl methacrylate 71, and methacrylic acid 7.8 parts were  
 polymerized to give a carboxyl group-containing graft polymer, 60 parts of  
 which was reacted with 16.8 parts glycidyl methacrylate to give a  
 photopolymerizable dispersing agent. A composition comprising TM black 3952  
 (Cu, Fe, Mn, Zr-containing metal oxide pigment), the photopolymerizable  
 dispersing agent prepared above, bisphenol A-type epoxy acrylate alkali-  
 soluble binder, dipentaerythritol pentaacrylate, and photopolymn. initiators  
 of  
 2-benzyl-2-dimethylamino-1-(4-morpholinophenyl)butanone, 4,4'-  
 diethylthioxanthone, 2,4-diethylthioxanthone, and biimidazole was applied on a  
 glass plate to form light blocking layer, which was exposed to high pressure

10/579,066

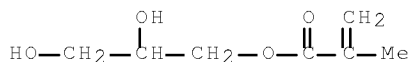
mercury lamp and developed with a KOH solution showing good resolution of pattern and development property.

IT 232607-32-8P, 2-Hydroxyethyl methacrylate-methacrylic acid-methyl methacrylate graft copolymer glycidyl methacrylate ester 235756-08-8P, AA 6-2-hydroxyethyl methacrylate-methacrylic acid graft copolymer glycidyl methacrylate ester  
(photopolymerizable dispersing agent; preparation of photopolymerizable pigment dispersing agents for photoresist compns.)  
RN 232607-32-8 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, polymer with 2-hydroxyethyl 2-methyl-2-propenoate and methyl 2-methyl-2-propenoate, 2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl ester, graft (9CI)  
(CA INDEX NAME)

CM 1

CRN 5919-74-4

CMF C7 H12 O4



CM 2

CRN 232607-31-7

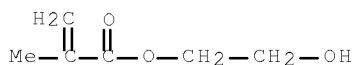
CMF (C6 H10 O3 . C5 H8 O2 . C4 H6 O2)x

CCI PMS

CM 3

CRN 868-77-9

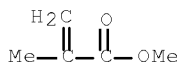
CMF C6 H10 O3



CM 4

CRN 80-62-6

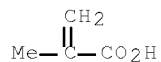
CMF C5 H8 O2



CM 5

CRN 79-41-4

CMF C4 H6 O2



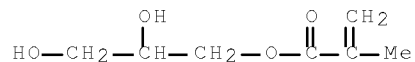
RN 235756-08-8 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with 2-hydroxyethyl  
 2-methyl-2-propenoate and Macromonomer AA 6,  
 2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxylpropyl ester, graft (9CI)  
 (CA INDEX NAME)

CM 1

CRN 5919-74-4

CMF C7 H12 O4



CM 2

CRN 235756-07-7

CMF (C6 H10 O3 . C4 H6 O2 . Unspecified)x

CCI PMS

CM 3

CRN 122525-04-6

CMF Unspecified

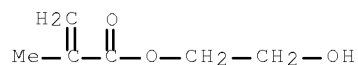
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 4

CRN 868-77-9

CMF C6 H10 O3

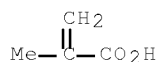




CM 5

CRN 79-41-4

CMF C4 H6 O2



IT 235756-11-3p 235756-16-8p

```
(preparation of photoresist compns. containing photopolymerizable pigment
dispersing agents)
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RN 235756-11-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with 2-hydroxyethyl  
2-methyl-2-propenoate and Macromonomer AA 6,  
2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl ester, graft,  
polymer with 2-[[3-hydroxy-2,2-bis[(1-oxo-2-  
propenyl)oxy]methyl]propoxy]methyl]-2-[[1-oxo-2-propenyl)oxy]methyl]-  
1,3-propanediyl di-2-propenoate and VR 60TH (9CI) (CA INDEX NAME)

CM 1

CRN 233672-85-0

CMF Unspecified

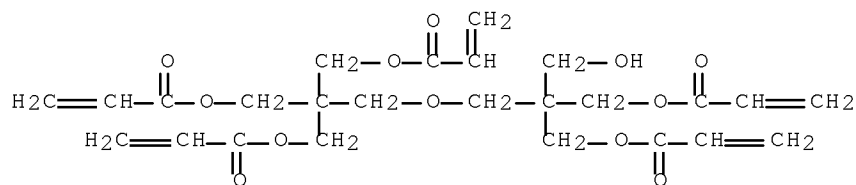
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 2

CRN 60506-81-2

CMF C25 H32 O12



CM 3

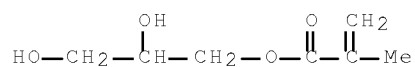
CRN 235756-08-8

```
CMF    C7  H12  04  .  x  (C6  H10  03  .  C4  H6  02  .  Unspecified)x
```

CM 4

CRN 5919-74-4

CMF C7 H12 O4



CM 5

CRN 235756-07-7

CMF (C6 H10 O3 . C4 H6 O2 . Unspecified)x

CCI PMS

CM 6

CRN 122525-04-6

CMF Unspecified

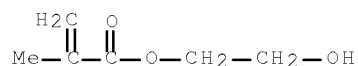
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 7

CRN 868-77-9

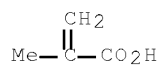
CMF C6 H10 O3



CM 8

CRN 79-41-4

CMF C4 H6 O2



RN 235756-16-8 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with 2-hydroxyethyl  
 2-methyl-2-propenoate and methyl 2-methyl-2-propenoate,  
 2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl ester, graft,  
 polymer with 2-[[3-hydroxy-2,2-bis[(1-oxo-2-  
 propenyl)oxy]methyl]propoxy]methyl]-2-[[[(1-oxo-2-propenyl)oxy]methyl]-  
 1,3-propanediyl di-2-propenoate and VR 60TH (9CI) (CA INDEX NAME)

CM 1

CRN 233672-85-0

CMF Unspecified

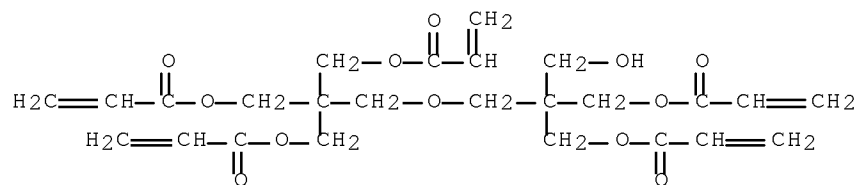
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 2

CRN 60506-81-2

CMF C25 H32 O12



CM 3

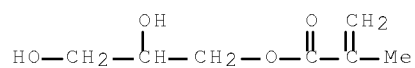
CRN 232607-32-8

CMF C7 H12 O4 . x (C6 H10 O3 . C5 H8 O2 . C4 H6 O2)x

CM 4

CRN 5919-74-4

CMF C7 H12 O4



CM 5

CRN 232607-31-7

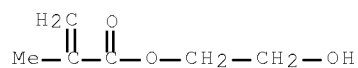
CMF (C6 H10 O3 . C5 H8 O2 . C4 H6 O2)x

CCI PMS

CM 6

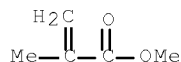
CRN 868-77-9

CMF C6 H10 O3



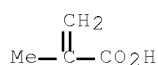
CM 7

CRN 80-62-6  
CMF C5 H8 O2



CM 8

CRN 79-41-4  
CMF C4 H6 O2



- IC ICM C08L051-00  
ICS C08F290-02; C08F291-00; C08L063-10; C09D005-00; C09D007-12;  
C09D163-10; G02B005-00; G02B005-20; G02B005-22; G03F007-027;  
C08F002-44; C09D011-00
- CC 42-13 (Coatings, Inks, and Related Products)  
Section cross-reference(s): 74
- ST photopolymerizable dispersing agent pigment photoresist compn;  
photosensitive colored compn photopolymerizable dispersing agent;  
black pigment copper iron manganese photoresist; methyl methacrylate  
graft polymer dispersing agent; hydroxyethyl methacrylate methacrylic  
acid graft polymer; epoxy acrylate photoresist compn; pentaerythritol  
acrylate photoresist compn; photopolymn initiator  
benzylmethylaminomorpholinophenylbutanone photoresist compn;  
ethylthioxanthone photopolymn initiator photoresist compn;  
color filter photopolymerizable dispersing agent
- IT Polymerization catalysts  
(photopolymn.; preparation of photoresist compns. containing  
photopolymerizable pigment dispersing agents)
- IT Optical filters  
(preparation of photoresist compns. containing photopolymerizable pigment  
dispersing agents for)
- IT 232607-32-8P, 2-Hydroxyethyl methacrylate-methacrylic  
acid-methyl methacrylate graft copolymer glycidyl methacrylate  
ester 235756-08-8P, AA 6-2-hydroxyethyl  
methacrylate-methacrylic acid graft copolymer glycidyl  
methacrylate ester  
(photopolymerizable dispersing agent; preparation of photopolymerizable  
pigment dispersing agents for photoresist compns.)
- IT 82799-44-8, 2,4-Diethylthioxanthone 119313-12-1,  
2-Benzyl-2-dimethylamino-1-(4-morpholinophenyl)butanone 125907-85-9,  
4,4'-Diethylthioxanthone 125934-36-3, Bi-1H-imidazole  
(photopolymn. initiator; preparation of photoresist compns. containing  
photopolymerizable pigment dispersing agents)
- IT 235756-11-3P 235756-16-8P  
(preparation of photoresist compns. containing photopolymerizable pigment  
dispersing agents)

L50 ANSWER 27 OF 35 HCAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 1999:388539 HCAPLUS Full-text  
 DOCUMENT NUMBER: 131:65901  
 TITLE: Photosensitive resin composition, photosensitive  
 element, manufacture of color  
 filter, and color filter  
 INVENTOR(S): Saito, Manabu; Yamazaki, Hiroshi; Kobayashi,  
 Hiromi; Tanigawa, Naohiro  
 PATENT ASSIGNEE(S): Hitachi Chemical Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
JP 11160867	A	19990618	JP 1997-321848	19971125
			<--	
PRIORITY APPLN. INFO.:			JP 1997-321848	19971125
			<--	

ED Entered STN: 23 Jun 1999

AB The title resin composition contains (a) an acrylic polymer having photopolymerizable unsatd. groups and aryl groups, (b) a photopolymerizable unsatd. group-containing monomer, (c) a photopolymn. initiator, and (d) a pigment. The photosensitive element comprises a photosensitive layer made of the composition A color filter is also claimed, which is manufactured by repeating a process comprising the steps of forming a coating of the composition on a substrate, imagewise irradiating the coating with an active ray to photo-cure the exposed regions, and removing the unexposed regions by development to form a pixel by using plural photosensitive resin compns. having different colors. The composition shows high photosensitivity and provides a high resolution pattern with good profile, thermal resistance, and solvent resistance.

IT 228414-63-9P, Acrylic acid-ethyl acrylate-ethyl methacrylate copolymer ester with glycidyl methacrylate  
 (photoresist containing unsatd. acrylic polymer with aryl group, unsatd. compound, and dye)

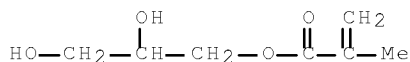
RN 228414-63-9 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, ethyl ester, polymer with ethyl 2-propenoate and 2-propenoic acid, 2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl ester (9CI) (CA INDEX NAME)

CM 1

CRN 5919-74-4

CMF C7 H12 O4

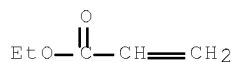


CM 2

CRN 29593-79-1  
 CMF (C6 H10 O2 . C5 H8 O2 . C3 H4 O2)x  
 CCI PMS

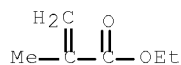
CM 3

CRN 140-88-5  
 CMF C5 H8 O2



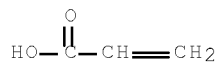
CM 4

CRN 97-63-2  
 CMF C6 H10 O2



CM 5

CRN 79-10-7  
 CMF C3 H4 O2



- IC ICM G03F007-027  
 ICS C08F002-50; C08F290-12; C08L033-06; G02B005-20; G03F007-004;  
 G03F007-028; G03F007-038; C09D004-06
- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other  
 Reprographic Processes)  
 Section cross-reference(s): 38
- ST acrylic polymer glycidyl methacrylate ester  
 photoresist
- IT Optical filters  
 Photoresists  
 (photoresist containing unsatd. acrylic polymer with aryl group,  
 unsatd. compound, and dye)
- IT 228414-63-9P, Acrylic acid-ethyl acrylate-ethyl methacrylate  
 copolymer ester with glycidyl methacrylate  
 (photoresist containing unsatd. acrylic polymer with aryl group,  
 unsatd. compound, and dye)

L50 ANSWER 28 OF 35 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1998:251365 HCAPLUS Full-text

DOCUMENT NUMBER: 129:10639

ORIGINAL REFERENCE NO.: 129:2215a,2218a

TITLE: Colored photosensitive resin composition and its use as color filter

INVENTOR(S): Tateno, Akihiko; Hidaka, Takahiro

PATENT ASSIGNEE(S): Sekisui Fine Chemical Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 10104412	A	19980424	JP 1996-255129	19960926
			<--	
PRIORITY APPLN. INFO.:			JP 1996-255129	19960926
			<--	

ED Entered STN: 02 May 1998

AB The composition contains an acrylic resin, a pigment, a polyfunctional monomer, a photopolymn. initiator, and Et lactate (I). The composition using I as solvent is uniformly dissolved and dispersed. The color filter having patternwise cured above composition made in air with high sensitivity.

IT 26982-25-2P

(colored photosensitive composition containing acrylic resin and polyfunctional monomer dissolved in Et lactate for color filter)

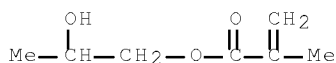
RN 26982-25-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with butyl 2-methyl-2-propenoate and 2-hydroxypropyl 2-methyl-2-propenoate (CA INDEX NAME)

CM 1

CRN 923-26-2

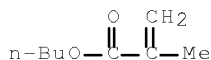
CMF C7 H12 O3



CM 2

CRN 97-88-1

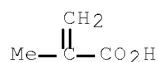
CMF C8 H14 O2



CM 3

CRN 79-41-4

CMF C4 H6 O2



- IC ICM G02B005-20  
ICS C08F020-10; C08L033-00; G03F007-004; G03F007-027; G03F007-028;  
G03F007-033
- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)  
Section cross-reference(s): 38
- ST photosensitive resin compn ethyl lactate solvent; acrylic resin  
photosensitive compn color filter
- IT Optical filters  
Photoresists  
(colored photosensitive composition containing acrylic resin and  
polyfunctional monomer dissolved in Et lactate for color  
filter)
- IT Pigments, nonbiological  
(in colored photosensitive composition containing acrylic resin and  
polyfunctional monomer dissolved in Et lactate for color  
filter)
- IT Polymerization catalysts  
(photopolymn.; in colored photosensitive composition containing acrylic  
resin and polyfunctional monomer dissolved in Et lactate for  
color filter)
- IT 3524-68-3, PE 3A  
(PE 3A; colored photosensitive composition containing acrylic resin and  
polyfunctional monomer dissolved in Et lactate for color  
filter)
- IT 42880-08-0, 2-(2,4-Dimethoxystyryl)-4,6-bis(trichloromethyl)-s-  
triazine  
(TAZ 114, polymerization initiator; colored photosensitive composition  
containing  
acrylic resin and polyfunctional monomer dissolved in Et lactate  
for color filter)
- IT 26982-25-2P  
(colored photosensitive composition containing acrylic resin and  
polyfunctional monomer dissolved in Et lactate for color  
filter)
- IT 28961-43-5 29570-58-9, DPE 6A  
(colored photosensitive composition containing acrylic resin and  
polyfunctional monomer dissolved in Et lactate for color  
filter)
- IT 90-93-7, 4,4'-Diethylaminobenzophenone 90-94-8 149-30-4, 2-  
Mercaptobenzothiazole 2382-96-9, 2-  
Mercaptobenzoxazole 7189-82-4,  
2,2'-Bis(2-chlorophenyl)-4,4',5,5'-tetraphenyl-1,2'-biimidazole  
150275-22-2 151052-45-8, TAZ 118 160509-79-5, TAZ 111  
180308-15-0 206355-15-9  
(polymerization initiator; colored photosensitive composition containing  
acrylic  
resin and polyfunctional monomer dissolved in Et lactate for



color filter)

IT 97-64-3, Ethyl lactate  
(solvent; colored photosensitive composition containing acrylic resin and  
polyfunctional monomer dissolved in Et lactate for color  
filter)

L50 ANSWER 29 OF 35 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1998:190332 HCAPLUS Full-text

DOCUMENT NUMBER: 128:258495

ORIGINAL REFERENCE NO.: 128:51161a, 51164a

TITLE: Coating compositions with good adhesion and  
abrasion, soiling, chemical, and heat resistanceINVENTOR(S): Harada, Takamasa; Kudo, Takanori; Yamaguchi,  
Hidemasa; Nozaki, Masako

PATENT ASSIGNEE(S): Hoechst Industry Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
JP 10077448	A	19980324	JP 1996-231130	19960830

&lt;--

PRIORITY APPLN. INFO.: JP 1996-231130 19960830

&lt;--

ED Entered STN: 01 Apr 1998

AB Title coating compns. are useful as protective coating for transparent  
substrates such as color filters and comprise polymers and solvents and are  
characterized by containing a compound selected from alkoxysilanes,  
alkoxytitaniums, alkoxyaluminums, and alkoxyzirconiums. The compns. may also  
contain heat crosslinking agents and active ray polymerization initiators.  
The polymers are typically acrylic polymers and aqueous alkali soluble or at  
least swelling in aqueous alkali.

IT ~~205126-72-3P~~(coating compns. with good adhesion and abrasion, soiling, chemical,  
and heat resistance)

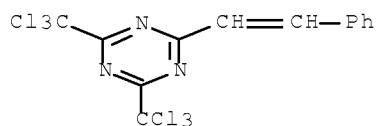
RN 205126-72-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with methyl  
2-methyl-2-propenoate, oxiranylmethyl 2-methyl-2-propenoate and  
2-(2-phenylethenyl)-4,6-bis(trichloromethyl)-1,3,5-triazine (9CI) (CA  
INDEX NAME)

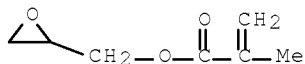
CM 1

CRN 42880-03-5

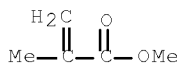
CMF C13 H7 C16 N3



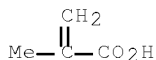
CM 2

CRN 106-91-2  
CMF C7 H10 O3

CM 3

CRN 80-62-6  
CMF C5 H8 O2

CM 4

CRN 79-41-4  
CMF C4 H6 O2

IC ICM C09D201-00  
ICS C09D004-06; C09D133-02; C09D133-04; C09D201-02; C09D201-08;  
C08F290-06

CC 42-7 (Coatings, Inks, and Related Products)

IT 205126-72-3P  
(coating compns. with good adhesion and abrasion, soiling, chemical,  
and heat resistance)

IT 919-30-2,  $\gamma$ -Aminopropyltriethoxysilane 1071-76-7,  
Tetrabutoxyzirconium 1760-24-3,  
 $\gamma$ -(2-Aminoethyl)aminopropyltrimethoxysilane 4420-74-0,  
 $\gamma$ -Mercaptopropyltrimethoxysilane 32670-03-4  
68443-53-8 109190-12-7, Coronate 2507  
(coating compns. with good adhesion and abrasion, soiling, chemical,  
and heat resistance)

L50 ANSWER 30 OF 35 HCAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 1997:558127 HCAPLUS Full-text  
DOCUMENT NUMBER: 127:249336  
ORIGINAL REFERENCE NO.: 127:48721a, 48724a  
TITLE: Manufacture of microencapsulated pigment

compositions and aqueous coloring solutions with dispersion stability

INVENTOR(S): Takao, Nagayuki; Asada, Masahiko; Saito, Naoto  
 PATENT ASSIGNEE(S): Dainippon Ink and Chemicals, Inc., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 19 pp.  
 CODEN: JKXXAF

DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09217019	A	19970819	JP 1996-25297	19960213
			<--	
PRIORITY APPLN. INFO.:			JP 1996-25297	19960213
			<--	

ED Entered STN: 01 Sep 1997

AB The compns., useful for coatings, textile printing, inks, color filters, are manufactured by mixing (dry-ground) crude pigments with CO<sub>2</sub>H-containing acrylic resin alkali salts and H<sub>2</sub>O and/or aqueous solvents; mech. dispersing the mixts.; crystallizing the resins on the pigments by adding acids; and neutralizing the crystals by adding alkalies. Thus, 800 parts ground Sumitone Fast Violet RL 4R (carbazoledioxazine violet pigment) was mixed with resin (prepared from Bu methacrylate 175, Bu acrylate 10.7,  $\beta$ -hydroxyethyl methacrylate 37.5, and methacrylic acid 26.8 parts) 800, dimethylethanolamine (I) 44.4, and H<sub>2</sub>O 2355.6 parts at 75° for 5 h, dispersed, mixed with HCl to pH 4.9, and neutralized with I to give a pigment composition A textile printing paste was prepared using the pigment composition to show good coloring of cotton satin.

IT 192193-10-5P

(microcapsules; microencapsulated pigment compns. for aqueous coloring solns. with dispersion stability)

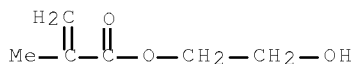
RN 192193-10-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with butyl 2-methyl-2-propenoate, butyl 2-propenoate, 2-hydroxyethyl 2-methyl-2-propenoate and oxiranylmethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 868-77-9

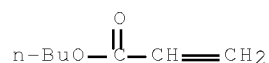
CMF C6 H10 O3



CM 2

CRN 141-32-2

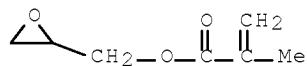
CMF C7 H12 O2



CM 3

CRN 106-91-2

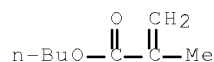
CMF C7 H10 O3



CM 4

CRN 97-88-1

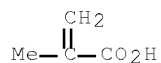
CMF C8 H14 O2



CM 5

CRN 79-41-4

CMF C4 H6 O2



- IC ICM C09B067-20  
ICS C08K005-16; C08L033-02; C08L033-06; C09B067-08; C09B067-46;  
C09C003-00; C09C003-10; C09D011-00
- CC 40-6 (Textiles and Fibers)  
Section cross-reference(s): 41, 42, 74
- ST pigment compn acrylic resin microencapsulation; coating pigment  
acrylic resin microencapsulation; textile printing pigment acrylic  
resin; ink pigment acrylic resin microencapsulation; color  
filter pigment acrylic resin
- IT Optical filters  
Pigments, nonbiological  
(microencapsulated pigment compns. for aqueous coloring solns. with  
dispersion stability)

IT 70977-05-8P ~~192193-10-5P~~  
 (microcapsules; microencapsulated pigment compns. for aqueous coloring  
 solns. with dispersion stability)

L50 ANSWER 31 OF 35 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1997:490719 HCAPLUS Full-text

DOCUMENT NUMBER: 127:197824

ORIGINAL REFERENCE NO.: 127:38219a,38222a

TITLE: Photopolymerizable compositions for color  
 filters with high sensitivity at exposure  
 and developability

INVENTOR(S): Urano, Toshiyoshi; Ikeda, Shingo; Hino, Etsuko

PATENT ASSIGNEE(S): Mitsubishi Chemical Industries Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
JP 09179297	A	19970711	JP 1995-334825	19951222
			<--	
PRIORITY APPLN. INFO.:			JP 1995-334825	19951222
			<--	

ED Entered STN: 04 Aug 1997

GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB The composition, useful for manufacture of color filters, contains an  
 ethylenically-unsatd. compound having aminophenyl or aminocyclohexyl skeleton.  
 The ethylenically-unsatd. compound may have  $\geq 1$  structure of I-IV [R1, R2 = H,  
 halo; R3 = (un)substituted C1-20 alkylene; R4 = H, C1-10 alkyl; R5 = H, Me; Z  
 = H, (OH-containing) substituent; m = 0-6; n = 1, 2].

IT ~~194164-87-9P 194164-88-0P 194164-90-4P~~  
~~194164-91-5P~~

(photopolymerizable composition for color filters  
 with high exposure sensitivity and developability)

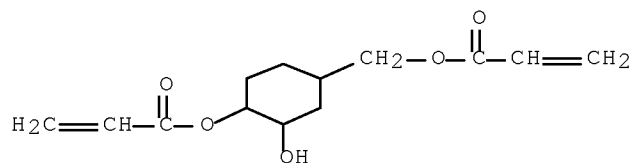
RN 194164-87-9 HCAPLUS

CN 2-Propenoic acid, polymer with ethenylbenzene,  
 methylenebis[4,1-phenylenenitrilobis(2-hydroxy-3,1-propanediyl)]  
 tetra-2-propenoate, (1-methylethenyl)benzene and  
 [4-[(1-oxo-2-propenyl)oxy]-3-hydroxycyclohexyl]methyl 2-propenoate  
 (9CI) (CA INDEX NAME)

CM 1

CRN 181224-38-4

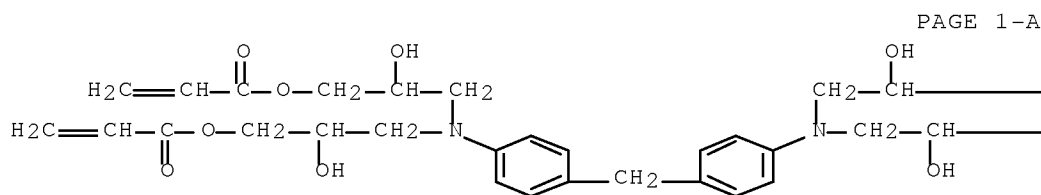
CMF C13 H18 O5



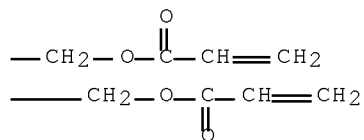
CM 2

CRN 108338-68-7

CMF C37 H46 N2 O12



PAGE 1-A

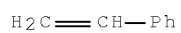


PAGE 1-B

CM 3

CRN 100-42-5

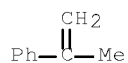
CMF C8 H8



CM 4

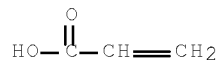
CRN 98-83-9

CMF C9 H10



CM 5

CRN 79-10-7  
CMF C3 H4 O2

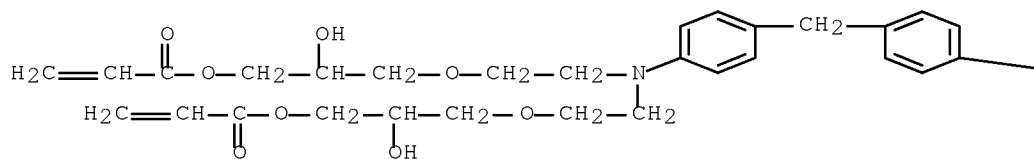


RN 194164-88-0 HCAPLUS  
CN 2-Propenoic acid, polymer with ethenylbenzene,  
[3-hydroxy-4-[(1-oxo-2-propenyl)oxy]cyclohexyl)methyl 2-propenoate,  
methylenebis[4,1-phenyleneiminobis[2,1-ethanediyl]oxy(2-hydroxy-3,1-  
propanediyl)]] tetra-2-propenoate and (1-methylethenyl)benzene (9CI)  
(CA INDEX NAME)

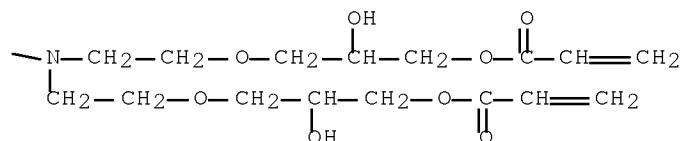
CM 1

CRN 194164-83-5  
CMF C45 H62 N2 O16

PAGE 1-A



PAGE 1-B

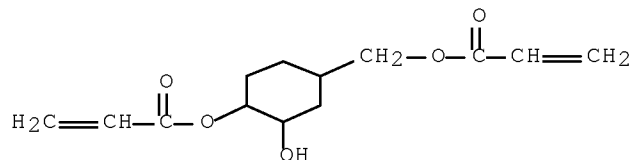


CM 2

CRN 181224-38-4

10/579,066

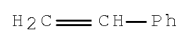
CMF C13 H18 O5



CM 3

CRN 100-42-5

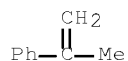
CMF C8 H8



CM 4

CRN 98-83-9

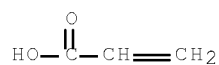
CMF C9 H10



CM 5

CRN 79-10-7

CMF C3 H4 O2



RN 194164-90-4 HCAPLUS

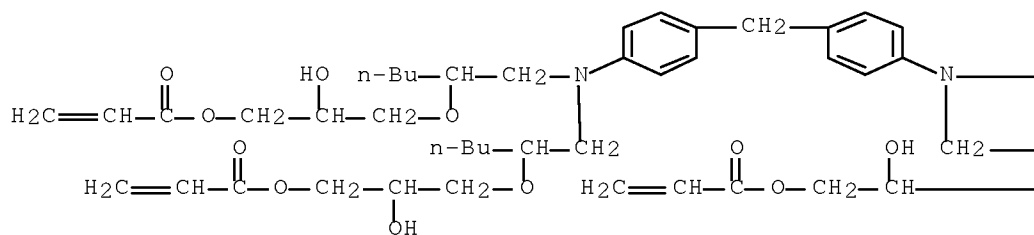
CN 2-Propenoic acid, polymer with ethenylbenzene,  
[3-hydroxy-4-[(1-oxo-2-propenyl)oxy]cyclohexyl]methyl 2-propenoate,  
methylenebis[4,1-phenyleneiminobis[(1-butyl-2,1-ethanediyl)oxy(2-  
hydroxy-3,1-propanediyl)]] tetra-2-propenoate and  
(1-methylethenyl)benzene (9CI) (CA INDEX NAME)

CM 1

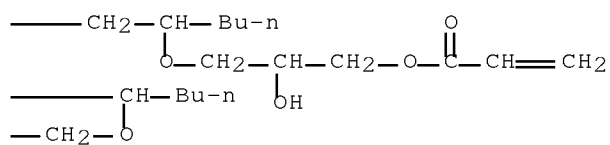


CRN 194164-85-7  
CMF C61 H94 N2 O16

PAGE 1-A

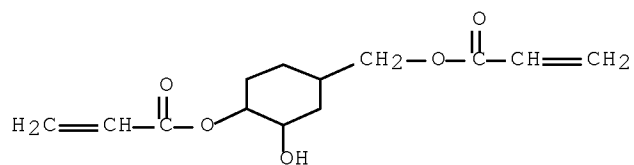


PAGE 1-B



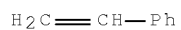
CM 2

CRN 181224-38-4  
CMF C13 H18 O5



CM 3

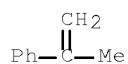
CRN 100-42-5  
CMF C8 H8



CM 4

CRN 98-83-9

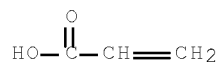
CMF C9 H10



CM 5

CRN 79-10-7

CMF C3 H4 O2



RN 194164-91-5 HCAPLUS

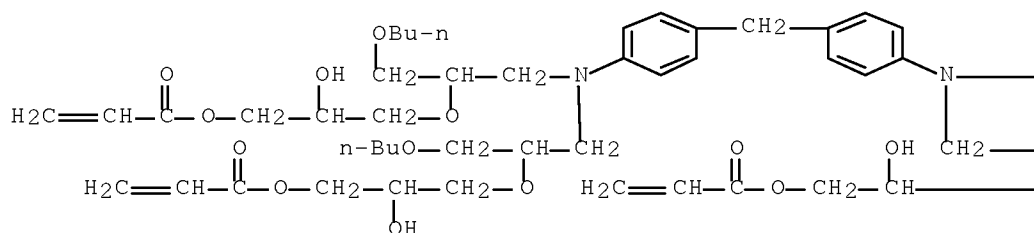
CN 2-Propenoic acid, polymer with ethenylbenzene,  
 [3-hydroxy-4-[(1-oxo-2-propenyl)oxy]cyclohexyl]methyl 2-propenoate,  
 methylenebis[4,1-phenyleneiminobis[[1-(butoxymethyl)-2,1-ethanediyl]oxy(2-hydroxy-3,1-propanediyl)]] tetra-2-propenoate and  
 (1-methylethenyl)benzene (9CI) (CA INDEX NAME)

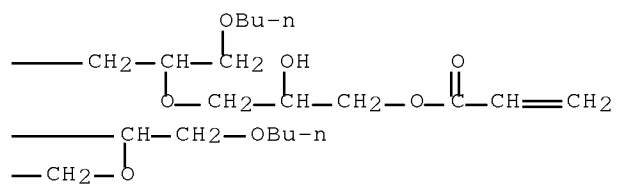
CM 1

CRN 194164-86-8

CMF C65 H102 N2 O20

PAGE 1-A

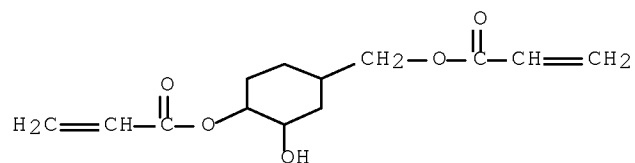




CM 2

CRN 181224-38-4

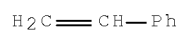
CMF C13 H18 O5



CM 3

CRN 100-42-5

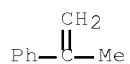
CMF C8 H8



CM 4

CRN 98-83-9

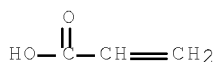
CMF C9 H10



CM 5

CRN 79-10-7

CMF C3 H4 O2



IC ICM G03F007-027  
ICS G02B005-20; G03F003-10; G03F007-004

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)  
Section cross-reference(s): 38

ST ~~color filter~~ photopolymerizable compn  
developability; aminophenyl based unsatd monomer photopolymerizable  
compn; aminocyclohexyl based unsatd monomer photopolymerizable compn;  
sensitivity improved photopolymerizable compn ~~color~~  
~~filter~~

IT Liquid crystal displays  
Optical filters  
Photoimaging materials  
(photopolymerizable composition for ~~color filters~~  
with high exposure sensitivity and developability)

IT 108338-68-7P 194164-87-9P 194164-88-0P  
194164-90-4P 194164-91-5P  
(photopolymerizable composition for ~~color filters~~  
with high exposure sensitivity and developability)

IT 181224-39-5 194164-83-5 194164-84-6 194164-85-7 194164-86-8  
194164-89-1  
(photopolymerizable composition for ~~color filters~~  
with high exposure sensitivity and developability)

L50 ANSWER 32 OF 35 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1997:483099 HCAPLUS Full-text

DOCUMENT NUMBER: 127:197823

ORIGINAL REFERENCE NO.: 127:38219a,38222a

TITLE: Photopolymerizable compositions with high  
sensitivity at exposure and developability

INVENTOR(S): Urano, Toshiyoshi; Ikeda, Shingo; Hino, Etsuko

PATENT ASSIGNEE(S): Mitsubishi Chemical Industries Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
JP 09179296	A	19970711	JP 1995-334824	19951222
			<--	
PRIORITY APPLN. INFO.:			JP 1995-334824	19951222
			<--	

ED Entered STN: 02 Aug 1997

GI

AB The composition, useful for manufacture of color filters, contains an ethylenically-unsatd. compound having oxycyclohexyloxyphenyl or oxycyclohexyloxycyclohexyl skeleton. The ethylenically-unsatd. compound may have  $\geq 1$  structure of I-IV [ $m = 1-6$ ;  $R_1, R_2 = H, \text{halo}$ ;  $Z = H, (\text{OH-containing})$  substituent;  $R_3 = H, \text{Me}$ ;  $Y = (\text{un})\text{substituted}$  substituent;  $R_4 = H, \text{C1-10 alkyl}$ ;  $X = \text{halo}$ ].

IT 194164-74-4P 194164-76-6P 194164-77-7P  
194164-78-8P 194164-79-9P 194164-80-2P  
(photopolymerizable composition for color filters  
with high exposure sensitivity and developability)

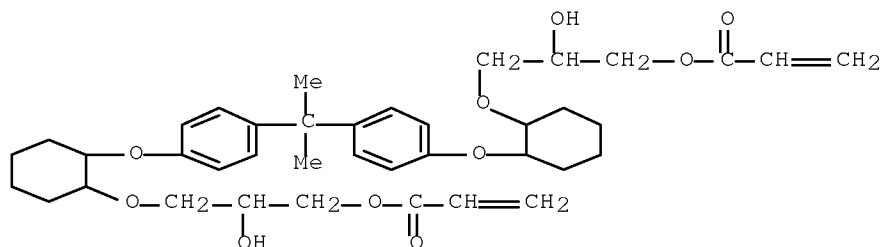
RN 194164-74-4 HCAPLUS

CN 2-Propenoic acid, polymer with ethenylbenzene,  
[3-hydroxy-4-[(1-oxo-2-propenyl)oxy]cyclohexyl]methyl 2-propenoate,  
(1-methylethenyl)benzene, (1-methylethylidene)bis[4,1-phenyleneoxy-2,1-cyclohexanedioxy(2-hydroxy-3,1-propanediyl)] di-2-propenoate (9CI)  
(CA INDEX NAME)

CM 1

CRN 194164-67-5

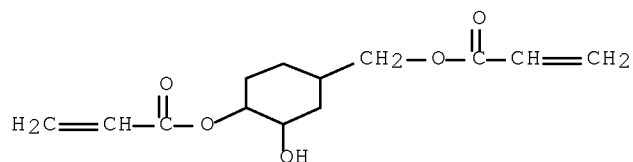
CMF C39 H52 O10



CM 2

CRN 181224-38-4

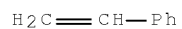
CMF C13 H18 O5



CM 3

CRN 100-42-5

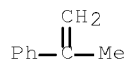
CMF C8 H8



CM 4

CRN 98-83-9

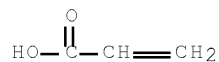
CMF C9 H10



CM 5

CRN 79-10-7

CMF C3 H4 O2



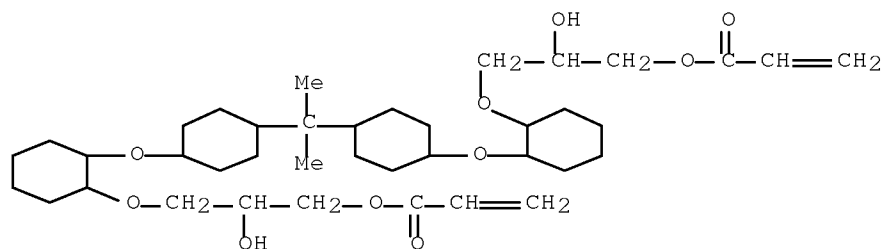
RN 194164-76-6 HCAPLUS

CN 2-Propenoic acid, polymer with ethenylbenzene,  
 [3-hydroxy-4-[(1-oxo-2-propenyl)oxy]cyclohexyl]methyl 2-propenoate,  
 (1-methylethenyl)benzene and (1-methylethylidene)bis[4,1-  
 cyclohexanediyl]oxy-2,1-cyclohexanediyl]oxy(2-hydroxy-3,1-propanediyl)]  
 di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 194164-69-7

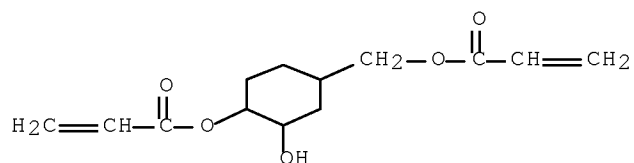
CMF C39 H64 O10



CM 2

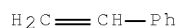
10/579,066

CRN 181224-38-4  
CMF C13 H18 O5



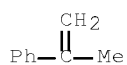
CM 3

CRN 100-42-5  
CMF C8 H8



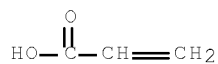
CM 4

CRN 98-83-9  
CMF C9 H10



CM 5

CRN 79-10-7  
CMF C3 H4 O2



RN 194164-77-7 HCAPLUS  
CN 2-Propenoic acid, polymer with ethenylbenzene,  
[3-hydroxy-4-[(1-oxo-2-propenyl)oxy]cyclohexyl]methyl 2-propenoate,  
methylenebis[4,1-phenyleneoxy-2,1-cyclohexanedioxy(2-hydroxy-3,1-  
propanediyl)] di-2-propenoate and (1-methylethenyl)benzene (9CI) (CA  
INDEX NAME)

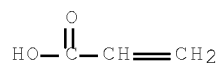




CM 5

CRN 79-10-7

CMF C3 H4 O2



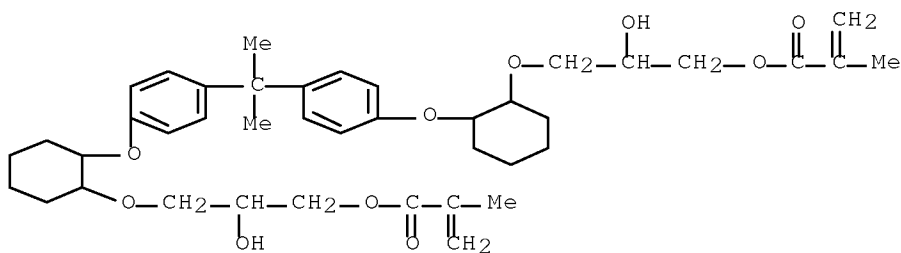
RN 194164-78-8 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, (1-methylethylidene)bis[4,1-phenyleneoxy-2,1-cyclohexanediyl]oxy(2-hydroxy-3,1-propanediyl)] ester, polymer with ethenylbenzene, [3-hydroxy-4-[(1-oxo-2-propenyl)oxy]cyclohexyl]methyl 2-propenoate, (1-methylethenyl)benzene and 2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 194164-71-1

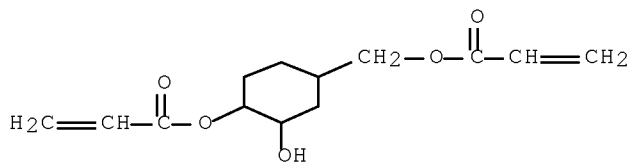
CMF C41 H56 O10



CM 2

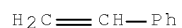
CRN 181224-38-4

CMF C13 H18 O5



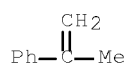
CM 3

CRN 100-42-5  
CMF C8 H8



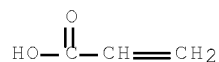
CM 4

CRN 98-83-9  
CMF C9 H10



CM 5

CRN 79-10-7  
CMF C3 H4 O2

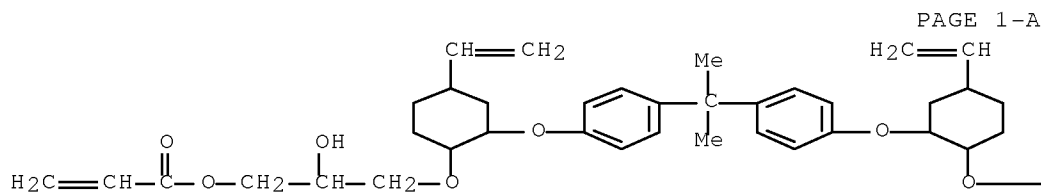


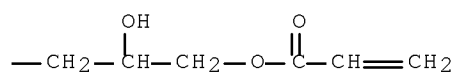
RN 194164-79-9 HCAPLUS

CN 2-Propenoic acid, polymer with ethenylbenzene,  
[3-hydroxy-4-[(1-oxo-2-propenyl)oxy]cyclohexyl]methyl 2-propenoate,  
(1-methylethenyl)benzene and (1-methylethylidene)bis[4,1-  
phenyleneoxy(4-ethenyl-2,1-cyclohexanediyl)oxy(2-hydroxy-3,1-  
propanediyl)] di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 194164-72-2  
CMF C43 H56 O10

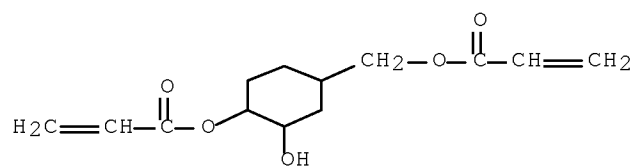




CM 2

CRN 181224-38-4

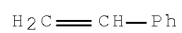
CMF C13 H18 O5



CM 3

CRN 100-42-5

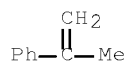
CMF C8 H8



CM 4

CRN 98-83-9

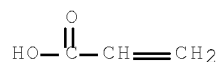
CMF C9 H10



CM 5

CRN 79-10-7

CMF C3 H4 O2



RN 194164-80-2 HCAPLUS

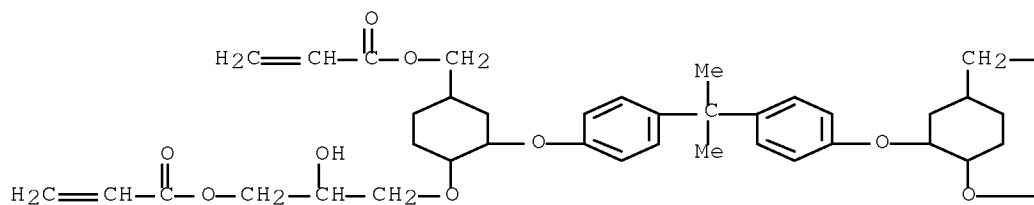
CN 2-Propenoic acid, polymer with ethenylbenzene,  
[3-hydroxy-4-[(1-oxo-2-propenyl)oxy]cyclohexyl]methyl 2-propenoate,  
(1-methylethenyl)benzene and (1-methylethylidene)bis[4,1-  
phenyleneoxy[4-[2-hydroxy-3-[(1-oxo-2-propenyl)oxy]propoxy]-3,1-  
cyclohexanediyl]bis(methylene)] di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

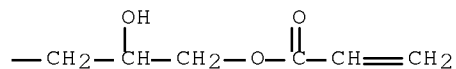
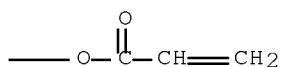
CRN 194164-73-3

CMF C47 H60 O14

PAGE 1-A



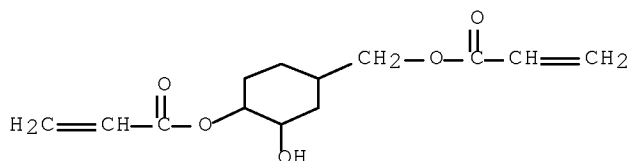
PAGE 1-B



CM 2

CRN 181224-38-4

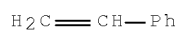
CMF C13 H18 O5



CM 3

CRN 100-42-5

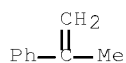
CMF C8 H8



CM 4

CRN 98-83-9

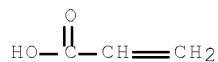
CMF C9 H10



CM 5

CRN 79-10-7

CMF C3 H4 O2



IC ICM G03F007-027  
 ICS G03F007-027; C08F020-26; C08F299-02; G02B005-20; G03F003-10;  
 G03F007-00; G03F007-004; G03F007-028; C08L033-14  
 CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other  
 Reprographic Processes)  
 Section cross-reference(s): 38  
 ST color filter photopolymerizable compn  
 developability; oxycyclohexyloxyphenyl based unsatd monomer  
 photopolymerizable compn; oxycyclohexyloxycyclohexyl based unsatd  
 monomer photopolymerizable compn; sensitivity improved  
 photopolymerizable compn color filter

IT Liquid crystal displays  
 Optical filters  
 Photoimaging materials  
 (photopolymerizable composition for color filters  
 with high exposure sensitivity and developability)

IT 194164-67-5P 194164-68-6P 194164-73-3P 194164-74-4P  
 194164-75-5P 194164-76-6P 194164-77-7P  
 194164-78-8P 194164-79-9P 194164-80-2P  
 (photopolymerizable composition for color filters  
 with high exposure sensitivity and developability)

IT 181224-39-5 194164-69-7 194164-70-0 194164-71-1 194164-72-2  
 (photopolymerizable composition for color filters  
 with high exposure sensitivity and developability)

L50 ANSWER 33 OF 35 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1997:314828 HCAPLUS Full-text

DOCUMENT NUMBER: 126:299728

ORIGINAL REFERENCE NO.: 126:57901a,57904a

TITLE: Liquid crystal display color  
 filter containing silane coupling agent  
 and its manufacture

INVENTOR(S): Kimura, Yoichi; Tachiki, Shigeo; Kobayashi, Juji;  
 Sasaki, Shoichi; Akahori, Satohiko; Yamazaki,  
 Koji; Sato, Tsutomu

PATENT ASSIGNEE(S): Hitachi Chemical Co Ltd, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 09061616	A	19970307	JP 1995-213379	19950822
			<--	
PRIORITY APPLN. INFO.:			JP 1995-213379	19950822
			<--	

ED Entered STN: 16 May 1997

AB The liquid crystal display color filter is manufactured by repeating the steps of (1) applying a photosensitive color composition on a substrate, (2) drying, (3) exposing, and (4) developing for 3 or 4 different color images, in which the composition comprises (a) a resin with the average mol. 1,500-200,000 and the acid value 20-300, (b) a pigment, (c) a monomer containing  $\geq 1$  photopolymerizable unsatd. bond, (d) a photoinitiator, and (e) a silane coupling agent. The content of the silane coupling agent in the photosensitive color composition for forming the 2nd color image is set at a smaller value than that in the photosensitive color composition for forming the 1st color image. Use of the silane compound as described above increased adhesivity of the composition on the substrate and reduced an amount of the development residue on the unexposed area on the substrate.

IT 189067-13-8P, Acrylic acid-butyl acrylate-glycidyl  
 methacrylate-methyl methacrylate-trimethylolpropane triacrylate-KBM  
 503 copolymer 189067-15-0P, Acrylic acid-butyl  
 acrylate-glycidyl methacrylate-methyl methacrylate-pentaerythritol  
 tetraacrylate-KBM 503 copolymer 189067-17-2P, Acrylic  
 acid-1,4-butanediol diacrylate-butyl acrylate-glycidyl  
 methacrylate-methyl methacrylate-KBM 503 copolymer  
 (liquid crystal display color filter containing  
 silane coupling agent and its manufacture)

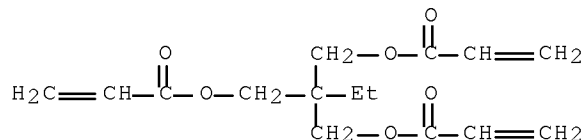
10/579,066

RN	189067-13-8	HCAPLUS
CN	2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate, 2-ethyl-2-[[ (1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate, oxiranylmethyl 2-methyl-2-propenoate, 2-propenoic acid and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)	

CM 1

CRN 15625-89-5

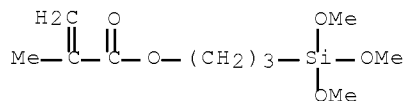
CMF C15 H20 O6



CM 2

CRN 2530-85-0

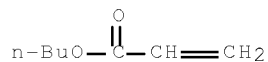
CMF C10 H20 O5 Si



CM 3

CRN 141-32-2

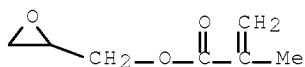
CMF C7 H12 O2



CM 4

CRN 106-91-2

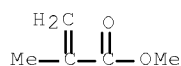
CMF C7 H10 O3



CM 5

CRN 80-62-6

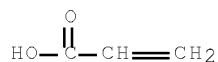
CMF C5 H8 O2



CM 6

CRN 79-10-7

CMF C3 H4 O2



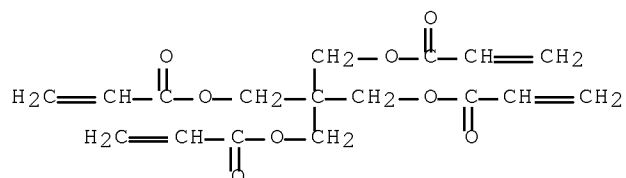
RN 189067-15-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with  
 2,2-bis[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl  
 di-2-propenoate, butyl 2-propenoate, oxiranylmethyl  
 2-methyl-2-propenoate, 2-propenoic acid and 3-(trimethoxysilyl)propyl  
 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 4986-89-4

CMF C17 H20 O8

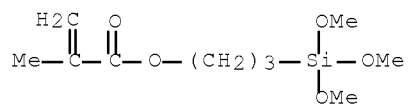


CM 2



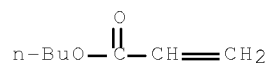
10/579,066

CRN 2530-85-0  
CMF C10 H20 O5 Si



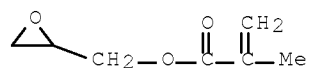
CM 3

CRN 141-32-2  
CMF C7 H12 O2



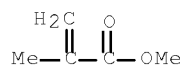
CM 4

CRN 106-91-2  
CMF C7 H10 O3



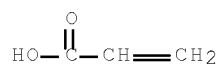
CM 5

CRN 80-62-6  
CMF C5 H8 O2



CM 6

CRN 79-10-7  
CMF C3 H4 O2



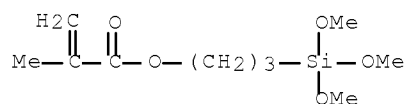
RN 189067-17-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with 1,4-butanediyl  
di-2-propenoate, butyl 2-propenoate, oxiranylmethyl  
2-methyl-2-propenoate, 2-propenoic acid and 3-(trimethoxysilyl)propyl  
2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 2530-85-0

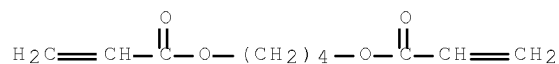
CMF C10 H20 O5 Si



CM 2

CRN 1070-70-8

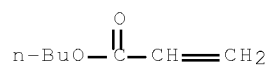
CMF C10 H14 O4



CM 3

CRN 141-32-2

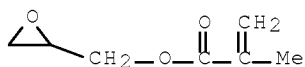
CMF C7 H12 O2



CM 4

CRN 106-91-2

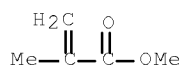
CMF C7 H10 O3



CM 5

CRN 80-62-6

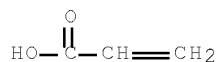
CMF C5 H8 O2



CM 6

CRN 79-10-7

CMF C3 H4 O2



IT 30400-34-1P

(liquid crystal display color filter containing  
silane coupling agent and its manufacture)

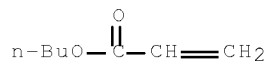
RN 30400-34-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl  
2-propenoate, 2-oxiranylmethyl 2-methyl-2-propenoate and 2-propenoic  
acid (CA INDEX NAME)

CM 1

CRN 141-32-2

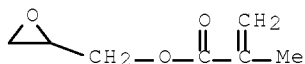
CMF C7 H12 O2



CM 2

CRN 106-91-2

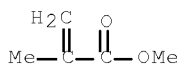
CMF C7 H10 O3



CM 3

CRN 80-62-6

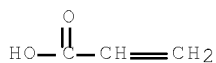
CMF C5 H8 O2



CM 4

CRN 79-10-7

CMF C3 H4 O2



- IC ICM G02B005-20  
ICS G02F001-1335; G03F007-032; G03F007-075
- CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 38
- ST liq crystal display silane coupling agent; color filter liq crystal display
- IT Liquid crystal displays  
Optical filters  
(liquid crystal display color filter containing silane coupling agent and its manufacture)
- IT Carbon black, uses  
(liquid crystal display color filter containing silane coupling agent and its manufacture)
- IT Coupling agents  
(silane; liquid crystal display color filter containing silane coupling agent and its manufacture)
- IT 189067-13-8P, Acrylic acid-butyl acrylate-glycidyl methacrylate-methyl methacrylate-trimethylolpropane triacrylate-KBM 503 copolymer 189067-15-0P, Acrylic acid-butyl acrylate-glycidyl methacrylate-methyl methacrylate-pentaerythritol tetraacrylate-KBM 503 copolymer 189067-17-2P, Acrylic acid-1,4-butanediol diacrylate-butyl acrylate-glycidyl methacrylate-methyl methacrylate-KBM 503 copolymer  
(liquid crystal display color filter containing

silane coupling agent and its manufacture)  
 IT 2530-85-0  
 (liquid crystal display color filter containing  
 silane coupling agent and its manufacture)  
 IT 30400-34-1P  
 (liquid crystal display color filter containing  
 silane coupling agent and its manufacture)  
 IT 147-14-8 4051-63-2, Pigment red 177 14302-13-7, Pigment green 36  
 36888-99-0, Pigment yellow 139 215247-95-3, Pigment violet 23  
 (liquid crystal display color filter containing  
 silane coupling agent and its manufacture)

L50 ANSWER 34 OF 35 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1996:440165 HCAPLUS Full-text

DOCUMENT NUMBER: 125:100422

ORIGINAL REFERENCE NO.: 125:18595a,18598a

TITLE: Color imaging material, photosensitive liquid  
 using it, photosensitive element, color  
 filter, and its manufacture

INVENTOR(S): Sasaki, Shoichi; Tachiki, Shigeo; Kobayashi, Juji;  
 Akahori, Satohiko; Yamazaki, Koji; Sato, Tsutomu;  
 Kimura, Yoichi

PATENT ASSIGNEE(S): Hitachi Chemical Co Ltd, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 08106163	A	19960423	JP 1994-240014	19941004

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PRIORITY APPLN. INFO.: JP 1994-240014 19941004

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ED Entered STN: 25 Jul 1996

AB The material comprises (A) a resin of 20-300 acid value and 1500-200,000 weight-average mol. weight, (B) a pigment, (C) a monomer containing  $\geq 2$  photopolymerizable unsatd. bonds in mol., (D) a photopolymn. initiator, and (E) silane coupling agents, of which one containing vinylbenzylamino and trimethoxy, and the other containing methacryloxypropyl and trimethoxy, resp. The photosensitive liquid contains the material and an organic solvent. The element includes a support film and a layer containing the material. The manufacture comprises the steps of forming a film of the color-imaging material, irradiating it with an active beam to cure the exposed parts, developing it, and repeating these steps for each materials of different colors to form image elements. The color filter, manufactured as above, is also claimed. The material, element, and photosensitive liquid show good adhesion to the support and high photosensitivity, providing the color filter with improved optical properties.

IT 30400-34-1P

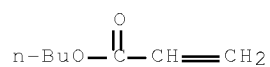
(resist composition; manufacture of color filter from  
 photosensitive liquid)

RN 30400-34-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl  
 2-propenoate, 2-oxiranylmethyl 2-methyl-2-propenoate and 2-propenoic  
 acid (CA INDEX NAME)

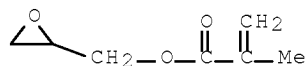
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CRN 141-32-2  
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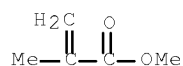
CM 2

CRN 106-91-2  
CMF C7 H10 O3



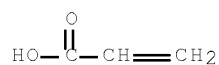
CM 3

CRN 80-62-6  
CMF C5 H8 O2



CM 4

CRN 79-10-7  
CMF C3 H4 O2



IC ICM G03F007-075  
ICS G02B005-20; G03F007-004; G03F007-027; G03F007-028; G03F007-032  
CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
ST color filter imaging photosensitive material;  
resist color filter display device; silane  
coupling agent photosensitive resist  
IT Optical filters

(color; manufacture of color filter from photosensitive liquid)

IT Coupling agents  
Optical imaging devices  
(manufacture of color filter from photosensitive liquid)

IT Lithography  
Resists  
(photo-, manufacture of color filter from photosensitive liquid)

IT 78-08-0, Vinyl triethoxysilane  
(S 220, resist composition; manufacture of color filter from photosensitive liquid)

IT 2530-85-0, KBM 503 34937-00-3, SZ 6032  
(coupling agent; manufacture of color filter from photosensitive liquid)

IT 90-93-7 119-61-9, Benzophenone, uses  
(initiator; manufacture of color filter from photosensitive liquid)

IT 147-14-8, C.I. Pigment Blue 15:6 4051-63-2, Pigment red 177  
5567-15-7, C.I. Pigment Yellow 83 14302-13-7, C.I. Pigment green 36  
36888-99-0, Pigment Yellow 139 215247-95-3, Pigment Violet 23  
(manufacture of color filter from photosensitive liquid)

IT 1070-70-8, 1,4-Butanediol diacrylate 4986-89-4, Pentaerythritol tetraacrylate 15625-89-5, Trimethylolpropane triacrylate  
(photopolymerizable monomer; manufacture of color filter from photosensitive liquid)

IT 30400-34-1P  
(resist composition; manufacture of color filter from photosensitive liquid)

L50 ANSWER 35 OF 35 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1996:379314 HCAPLUS Full-text

DOCUMENT NUMBER: 125:35498

ORIGINAL REFERENCE NO.: 125:6905a,6908a

TITLE: Manufacture of ultrathin photosensitive film useful for preparation of color filters

INVENTOR(S): Furubayashi, Hiromi; Yamazaki, Hiroshi; Saito, Manabu; Kakumaru, Hajime

PATENT ASSIGNEE(S): Hitachi Chemical Co Ltd, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 08073773	A	19960319	JP 1994-210311	19940905

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PRIORITY APPLN. INFO.: JP 1994-210311 19940905

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ED Entered STN: 29 Jun 1996

AB The title process involves coating a film with a solution obtained by dissolving a photosensitive resin composition containing (A) 45-70 parts of a film-forming polymer (Mw 50,000-150,000) containing 17-30% (meth)acrylic acid, (B) 30-55 parts ethylenic unsatd. compound, (C) 0.1-10 parts photopolymn.

10/579,066

initiator, and (D) 0.1-50 parts pigment or dye in an organic solvent (solubility parameter 9.0-11; b.p. 115-175°), followed by drying to give 0.5-5.0 µm-thick films. Preferably, the organic solvent is ethylene glycol monomethyl ether acetate, ethylene glycol monoethyl ether, ethylene glycol monobutyl ether, propylene glycol monomethyl ether, cyclohexanone, or iso-amyl alc.

IT 177964-03-3F

(manufacture of ultrathin photosensitive film for preparation of color filters)

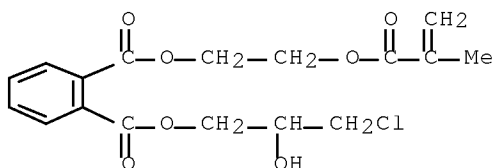
RN 177964-03-3 HCAPLUS

CN 1,2-Benzenedicarboxylic acid, 3-chloro-2-hydroxypropyl 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester, polymer with 2-ethylhexyl 2-propenoate, methyl 2-methyl-2-propenoate and 2-methyl-2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 54380-33-5

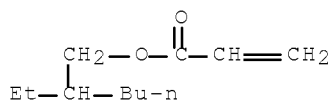
CMF C17 H19 Cl O7



CM 2

CRN 103-11-7

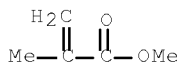
CMF C11 H20 O2



CM 3

CRN 80-62-6

CMF C5 H8 O2

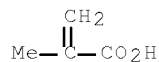




CM 4

CRN 79-41-4

CMF C4 H6 O2



- IC ICM C09D004-06  
ICS G02B005-20
- CC 38-3 (Plastics Fabrication and Uses)  
Section cross-reference(s): 73
- ST photosensitive film color filter ultrathin
- IT Optical filters  
Photoimaging compositions and processes  
(manufacture of ultrathin photosensitive film for preparation of color filters)
- IT 177964-03-3P  
(manufacture of ultrathin photosensitive film for preparation of color filters)
- IT 25133-98-6, 2-Ethylhexyl acrylate-methyl methacrylate-methacrylic acid copolymer 54380-33-5  
(photosensitive resin component; manufacture of ultrathin photosensitive film for preparation of color filters)
- IT 178037-14-4, Colortex Blue UEM 178037-15-5, Colortex Green UE 1203  
178037-16-6, Colortex Red UEM  
(pigment; manufacture of ultrathin photosensitive film for preparation of color filters)
- IT 119-61-9, Benzophenone, uses 101246-72-4  
(polymerization initiator; manufacture of ultrathin photosensitive film for preparation of color filters)
- IT 108-94-1, Cyclohexanone, uses 110-49-6, Ethylene glycol monomethyl ether acetate 110-80-5, Ethylene glycol monoethyl ether 111-15-9, Cellosolve acetate 111-76-2, Ethylene glycol monobutyl ether 123-51-3, Iso-amyl alcohol 1320-67-8, Propylene glycol monomethyl ether  
(solvent; manufacture of ultrathin photosensitive film for preparation of color filters)

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(FILE 'HOME' ENTERED AT 08:44:32 ON 27 MAR 2009)

FILE 'HCAPLUS' ENTERED AT 08:44:51 ON 27 MAR 2009

L1 1 SEA ABB=ON PLU=ON US20070083012/PN  
SEL RN

FILE 'REGISTRY' ENTERED AT 08:45:11 ON 27 MAR 2009

L2 8 SEA ABB=ON PLU=ON (25086-15-1/BI OR 42248-78-2/BI OR  
852316-39-3/BI OR 852316-40-6/BI OR 852316-41-7/BI OR  
852316-42-8/BI OR 852316-43-9/BI OR 852316-44-0/BI)  
L3 STR  
L4 50 SEA SSS SAM L3  
L5 STR L3  
L6 50 SEA SSS SAM L5  
L7 6 SEA ABB=ON PLU=ON L2 AND 3-5/NC

FILE 'HCAPLUS' ENTERED AT 09:07:46 ON 27 MAR 2009

L8 3 SEA ABB=ON PLU=ON L7

FILE 'REGISTRY' ENTERED AT 09:07:58 ON 27 MAR 2009

L9 STR L5  
L10 50 SEA SSS SAM L9  
L11 SCR 2043  
L12 50 SEA SSS SAM L9 AND L11  
L13 55359 SEA SSS FUL L9 AND L11  
L14 6 SEA ABB=ON PLU=ON L13 AND L2  
SAV L13 BER066/A  
L15 50 SEA SUB=L13 SSS SAM L5  
L16 STR  
L17 50 SEA SUB=L13 SSS SAM (L5 AND L16)  
L18 5040 SEA SUB=L13 SSS FUL (L5 AND L16)  
L19 6 SEA ABB=ON PLU=ON L18 AND L2  
L20 STR L9  
L21 50 SEA SUB=L13 SSS SAM (L20 AND L16)  
L22 6933 SEA SUB=L13 SSS FUL (L20 AND L16)  
L23 0 SEA ABB=ON PLU=ON L22 AND L2  
SAV L22 BER066A/A

FILE 'HCAPLUS' ENTERED AT 09:47:16 ON 27 MAR 2009

L24 3345 SEA ABB=ON PLU=ON L18  
L25 4885 SEA ABB=ON PLU=ON L22  
L26 7907 SEA ABB=ON PLU=ON (L24 OR L25)  
L27 1 SEA ABB=ON PLU=ON L26 AND L1  
L28 4179 SEA ABB=ON PLU=ON L26(L)PREP/RL  
E OPTICAL FILTERS/CT  
L29 21466 SEA ABB=ON PLU=ON "OPTICAL FILTERS"+PFT,NT/CT  
L30 225 SEA ABB=ON PLU=ON L28 AND L29  
L31 59 SEA ABB=ON PLU=ON L30 AND RACT/RL  
L32 1 SEA ABB=ON PLU=ON L30 AND CURABLE POLYMER COMPOUND?  
L33 9 SEA ABB=ON PLU=ON L30 AND METHACRYLATE ESTER?  
L34 2 SEA ABB=ON PLU=ON L30 AND CURABLE POLYMER?  
L35 65 SEA ABB=ON PLU=ON (L31 OR L32 OR L33 OR L34)  
L36 33 SEA ABB=ON PLU=ON L35 AND (1840-2003)/PRY,AY,PY  
L37 1 SEA ABB=ON PLU=ON L36 AND L1  
L38 242 SEA ABB=ON PLU=ON L28 AND (COLOUR OR COLOR) (2A)FILTER?  
L39 15 SEA ABB=ON PLU=ON L38 AND MERCAPTO?

L40 QUE ABB=ON PLU=ON METAL HALID? OR TERTIARY AMIN? OR  
 PYRIDIN? OR PYRIDINIUM? OR QUATERNARY AMMONIUM? OR  
 PHOSPHIN? OR PHOSPHONIUM? OR IMIDAZOL? OR BENZYLTRIMETHYL?  
 OR AMMONIUM CHLORID?  
 L41 1677 SEA ABB=ON PLU=ON QYE BENZYLTRIETHYL AMMONIUM CHLORID?  
 OR TETRABUTYL AMMONIUM BROMID? OR TRIPHENYL PHOSPHIN? OR  
 ETHYLTRIPHENYL PHOSPHONIUM BROMID? OR TETRAPHENYL PHOSPHONI  
 UM BROMID? OR BENZYLTRIPHENYL PHOSPHONIUM? OR 2-METHYL  
 IMIDAZOL?  
 L42 8 SEA ABB=ON PLU=ON L36 AND (L40 OR L41)  
 L43 3 SEA ABB=ON PLU=ON L39 AND (L40 OR L41)  
 L44 15 SEA ABB=ON PLU=ON L39 OR L43  
 L45 7 SEA ABB=ON PLU=ON L44 AND (1840-2003)/PRY,AY,PY  
 L46 35 SEA ABB=ON PLU=ON L36 OR L42 OR L45  
 L47 33 SEA ABB=ON PLU=ON L46 AND (COLOUR OR COLOR) (2A)FILTER?  
 L48 35 SEA ABB=ON PLU=ON L46 OR L47  
 L49 5 SEA ABB=ON PLU=ON L48 AND CATALYST?  
 L50 35 SEA ABB=ON PLU=ON L48 OR L49